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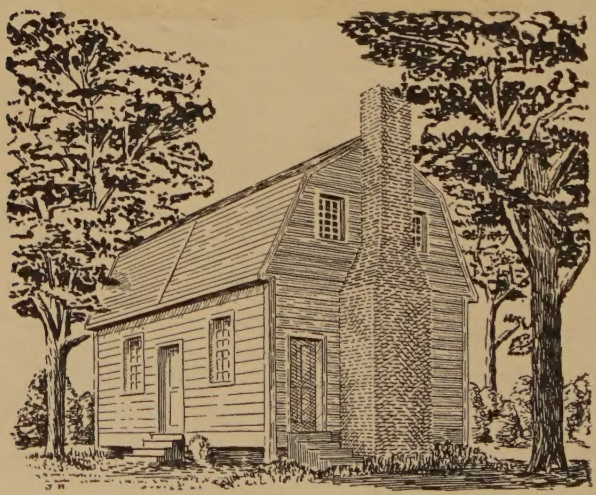

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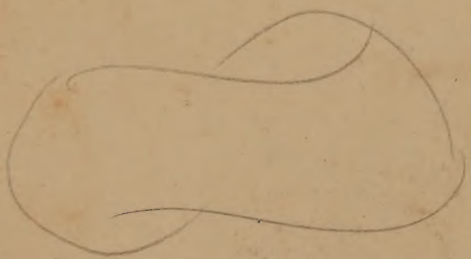

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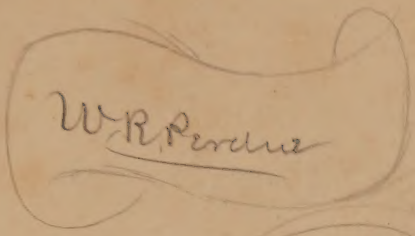

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SYNOPSIS

OF THE

COURSE OF LECTURES

ON

MATERIA MEDICA AND PHARMACY,

DELIVERED IN THE

University of Pennsylvania.

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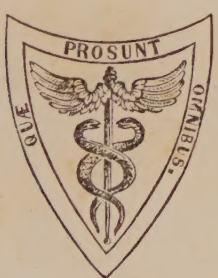
JOSEPH CARSON, M. D.

Second Edition, Revised.



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TO THE

STUDENTS OF MEDICINE

OF THE

University of Pennsylvania,

FOR

WHOSE ESPECIAL USE IT HAS BEEN PREPARED, AND WITH THE EARNEST DESIRE

THAT IT MAY LIGHTEN THEIR LABOR AND PROMOTE THEIR ADVANCEMENT,

THIS WORK

IS AFFECTIONATELY INSCRIBED,

BY

THE AUTHOR.

PREFATORY NOTICE.

The following outlines of the Lectures on Materia Medica and Pharmacy have been prepared, that the Student attending the course may possess a guide to the leading facts and principles comprised in so extended a subject.

No doubt can exist with respect to the advantages of such assistance. The strongest memory finds difficulty in appropriating all that is communicated by oral instruction, and many important points are lost to the generality of students. The text-books which treat of the same department pursue neither the order nor the method presented in the lectures, and loss of time is entailed by reading all that is relevant or irrelevant to the portion of the subject under consideration at any given period. The *United States Dispensatory*, and Pereira's *Elements of Materia Medica*, have been recommended in connection with the course; but so extensive is their range that they are scarcely adapted for the momentary requisitions of the student.

In the synopsis here given, a framework is afforded, which may, with ordinary industry, be filled in by notes

taken at the time the lectures are delivered, or by reference to the works specified. In the latter way much can be accomplished in the interim of the courses.

The motive which has influenced me in compiling the work from my manuscript notes, is the desire to give the pupils of the University a thorough knowledge of the important branch of medicine which it is my duty to teach. To the character of an independent treatise the work presents no claim; in fact, a large proportion of it requires the explanations given in the lecture room.

With the hope that it may prove serviceable, it has been inscribed to those in whose welfare I have the highest interest, and for whose benefit the labor of teaching becomes a pleasing occupation.

October, 1855.

MATERIA MEDICA.

INTRODUCTORY OBSERVATIONS.

The Science of Medicine has for its object the alleviation and cure of disease. Two kinds of agents are employed, Moral and Physical, the study and investigation of which constitute Acology, or the *Science of Remedies.*

Moral agents are employed to impress the mind and feelings, and are not to be overlooked by physicians; while physical agents are employed to act upon the body, and remove corporeal ailments.

Physical agents are derived from the material world in which we dwell. Some of them are absolutely necessary for the maintenance of life, and by proper management can be made to play an important part in the treatment of diseases; they come under the head of *Hygienic* Remedies. Others consist of substances found abundantly in the three kingdoms of nature, the Animal, the Vegetable, and the Mineral, which have been proved by observation and experience to have a decided controlling or perturbating influence over the organs of the body. These constitute the Materia Medica.

There are other agents which are mechanical in their application, but which so influence vital movements as to be important in diseased states; as venesection, issues, setons, acupuncture, &c.

A knowledge of the power and the application of remedies is the foundation of Therapeutics.

The term Pharmacology is employed for that of Materia Medica. It is more comprehensive. The articles of the Ma-

teria Medica, whether simple or modified, are called *Medicines*. PHARMACY is the art of preparing them for use; and by THERAPEUTICS is meant the application, guided by principles, which is made of them in the treatment of disease. PHARMACOLOGY embraces all of these subjects.

Medicines may be defined to be substances, derived from the organic and inorganic kingdoms, which inherently possess the power of affecting the solids and fluids of the body, and, through them, so changing the functional and organic movements as to be serviceable in diseased conditions.

Some articles of Diet will be found in the list of the Materia Medica, which have been there placed for convenience, in consequence of their adaptation to diseased states of the organs. A distinction is to be drawn between an article of food and a medicine; it depends essentially upon the assimilative capabilities of the former;—exceptions.

A distinction is also to be drawn between a *medicine* and a *poison*. This is more difficult, as medicines may become poisons, or poisons may be used as medicines. It is the application which determines whether articles of the materia medica are to be regarded as one or the other. When the impression is inordinate, so as to become injurious to the organs, the article used may be said to be poisonous. The *dose*, *peculiarities* of constitution, and *pathological conditions*, influence the effects. Inordinate medication is poisonous medication.

As there is some relation between food and medicines, so is there between food and poisons. Instances cited where food has acted poisonously.

The study of medicines involves attention to a number of circumstances, which may be divided into such as pertain to them as *simple bodies*, such as are important in a pharmaceutical point of view, and such as belong to them as therapeutic means.

Crude medicinal articles are obtained, by commerce, in the form of *drugs*, and, as such, must be studied with respect to their *sources* or *localities of production*, their *natural history*, the *modes of collecting and preparing them* for the market, and their *sensible properties*.

As objects of Pharmacy, their *chemical composition* and *relations* must be investigated.

With reference to Therapeutics, their *modes of operating*, *doses*, *appropriate application*, and *toxicological* effects must be inquired into.

Importance of knowing the localities from which drugs are derived.

The study of Botany and Natural History recommended.

Medicines are the tools of the profession; a knowledge of their sensible properties shown to be of absolute necessity.

A familiarity, of a practical character, with medicines cannot be dispensed with without entailing embarrassment and difficulty. In this connection, the subject of adulteration alluded to, and means of detecting it pointed out in general.

The distinction between *indigenous* and *exotic* productions, and definitions.

That mode of growth, including soil, climate, and tillage, is a powerful modifier of the properties of vegetables exhibited by examples; and the modes of collection and preparation shown to affect their virtues. This subject is connected with vegetable physiology.

The importance of *Chemistry* exhibited in determining the composition of articles and separating their *Principles*. These are divided into *Organic* or *Proximate*, as distinguished from *Elementary*. Illustrations.—Chemistry is essential to the operations of pharmacy, and in compounding medicines. It also affords the antidotes to poisons. But it is further important, in determining the changes which medicines undergo in the economy, and the alterations which are made in the solids and fluids, as therapeutics is connected with such modifications.

Some recommendations given as to the course of reading to be pursued, and the books best calculated to aid the student. A *Pharmacopœia* defined; its objects, importance, and advantages stated. The propriety of adhering to the national authority, the *United States Pharmacopœia*, insisted upon. *Nomenclature*, and its importance explained.

EFFECTS OF MEDICINES.

These cannot be determined except by observation and experiment, although various methods of determining them *à priori* have been devised. Speculation upon the effects of medicines has answered no good purpose; and we are forced to have recourse to experiment. When their effects have been determined, classification is admissible. Allusions made to natural history and other relations.

Medicines act by modifying the *solids* or *fluids:* upon the former by *augmenting* or *diminishing* their vital movements; and upon the latter by *increasing* or *lessening* their *quantity*, or *altering* their qualities. In these ways alone, the functions of organs, as well as the interior vital operations, termed organic, which are involved in assimilation or nutrition, are impressed and modified. It is not meant, however, that they are directed to one or the other exclusively. Both are intimately connected in disease.

Effects are exhibited by *phenomena*, which are apparent sooner or later. Some of them are rapid, while others are tardy in their appearance. Proof of this presented.

The effects are divided into *primary* and *secondary*.

The first are also called *physiological*, because they equally occur in health.

The secondary effects are induced through the primary; they are remote, and through them disease is removed or relieved; they are dependent on pathological as well as physiological laws; and, as they afford the therapeutical plan of action, are called sometimes the *therapeutical effects*.

The explanation of the effects and of the mode of their production, so far as possible, is known as the *modus operandi*.

Illustrations of the primary and secondary effects given, derived from those of a purgative, a diuretic, or a sudorific, and an explanation given of what is meant by an *indication*, and the means of fulfilling it.

The primary and secondary effects are not always distinct: the primary becomes, in some cases, the therapeutical, as in the

case of alterative medicines; or, in other cases, the primary and secondary are equally therapeutical, as in the case of opium and narcotics. Explanation given, derived from the use of opium in dysentery. Other examples.

Experiments upon animals, upon man, and clinical experience commented upon; and the necessity of distinguishing between the phenomena induced by medicines, and those belonging to disease, adverted to.

The question discussed, Are medicines specific in their curative action? and the idea of specific curative action shown to be inimical to the advance of true science.

A clear distinction is to be made between the reason *why* an article produces particular effects, and the *mode* in which they are produced. The one is beyond our scrutiny, and the other is a legitimate subject of investigation.

The *primary effects* of medicines take place in three ways—1. *Locally.* 2. *By means of nervous communication.* 3. *By entering the circulation.*

1. The *local action* of medicines explained and illustrated by examples.

2. The action of medicines through the *medium* of *nervous communication* is connected with the subject of the *sympathies.* An analysis of the sympathies, and of their connection with disease, presented. The doctrine of reflex action, and its connection with the effects of medicines, explained. The fact exhibited, that in some cases the sympathetic connection between organs may be brought into operation by the action of medicines upon the nervous system; but that, in other instances, the same sympathies are only commanded when articles are taken into the circulation. This mode of operation alone questioned, except in the case of stimuli. A compound mode of operation, by the circulation and the nerves jointly, shown to be most common.

3. The proof that substances *enter the circulation* is derived from direct experiments on animals; from the detection of them in the blood, in the tissues of the organs, and in the secretions. But it is further exhibited by the contamination which the blood and secretions undergo, so as to be capable,

when taken into the system of other living beings, of reproducing the effects of the substances with which contaminated;—by the identity of effects, when thrown into the circulation, with those in other ways produced;—and by the influence which the state of the circulation exerts upon absorption. Illustrations of these modes of proof.

Absorption takes place through the veins, as is shown by the experiments of Magendie, Segalis, Pannizza, Tiedemann, and Gmelin, and Mr. Brodie, but at the same time may be effected by the lacteals and lymphatics. The experiments detailed by which these conclusions have been arrived at.

The vessels mentioned have no patulous orifices or commencement; they are spread through a reticulated structure; and we are compelled to have recourse to the physical power of *imbibition* in the vessels to explain the fact of absorption. This has been termed by Dutrochet *endosmose*, and has been defined by Matteucci to be the "mutual action of two liquids on each other when separated by membrane," there being a greater affinity on the part of a dense fluid for a lighter one. The reverse of this is called *exosmose*. Explanation of the physical phenomena given, and the laws of their production. The agency of the blood and fluid in the vessels exhibited; and the necessity of all substances being in a state of *solution* before they can enter the bloodvessels presented. An examination made of the cases of insoluble substances which are decidedly active; and the possibility of their being made soluble demonstrated. Chemistry of the utmost importance in this inquiry.

OF THE DIFFERENCE IN THE EFFECTS OF MEDICINES.

Medicines have a decided *preference* for organs, which has been termed *medicinal affinity;* but they vary in the manner of impressing particular organs. This preference shown by reference to emetics, purgatives, diuretics, &c., and the variation of impression illustrated by some of the particular articles belonging to the classes mentioned.

Medicines are not limited to a single uniform mode of action on one organ, but may act differently on several; thus, for

example, digitalis lowers the heart's action, but stimulates the kidneys; and other instances may be brought forward in evidence.

Another fact worthy of comment is that, by peculiar administration, and the assistance of collateral circumstances, a medicine, which ordinarily produces one set of effects, may be made to produce one entirely different. Thus, the dilution of a solution of a saline substance will determine whether it acts on the bowels or kidneys; hence the same substances are included in the classes both of Purgatives and Diuretics.

The especial mode of operating pertaining to a medicine is induced in whatever manner it is brought to bear upon the organs for which it has an affinity. It seeks out, as it were, those which are peculiarly susceptible to its impression; thus, whether taken by the stomach, by the bowels or skin, &c., the same peculiar tendency is exhibited.

Medicines are regarded as acting *locally* or *generally*, and hence the division into *local medicines*, and *general medicines*. The propriety of this distinction is more apparent than real, for, although it may be borne out in the primary manifestations of the effects of medicines, yet in the secondary there is a resemblance; and it can hardly be said that any one which is termed a local remedy, as an emetic or a sinapism, is not general. For conventional purposes the division is useful.

A point which has occupied the thoughts of therapeutists is, Are medicines necessarily *stimulant* or *sedative?* There is no doubt that a set of medicines exist, which, as a primary or secondary result, exalt the vital actions; and another set which depress them. These effects, nevertheless, may be regarded as relative, as there are states of the system when stimulation would augment debility, and sedation contribute to the increase of strength. Stimulants sometimes produce sedation, and the reverse may take place. These propositions illustrated by examples.

Some medicines are neither stimulating nor sedative in their immediate impression, and yet in the end may be either. Illustration from Tonics and Alteratives.

The effects of medicines are either *physical*, *chemical*, or *vital*. The latter are sometimes termed dynamical. They are not con-

fined to these, however, and most frequently present a mixed character, as physico-vital and chemico-vital. Illustrations of these several effects.

Influences which modify the effects of medicines.

Disease.

Climate.

Modes of Living.

Habit.

Temperament and Idiosyncrasies.

Sex.

Age. Doses proportioned to age. Dr. Young's rule.

Time of Administration.

Mental Emotions.

PARTS TO WHICH MEDICINES ARE APPLIED.

I. *Stomach.*—This organ is most commonly used for the administration of medicines, owing to the relation which it bears to other portions of the economy, and the facility with which it can be employed. Remarks on this mode of administration.

II. *Rectum and Bowels.*—These organs are used with several indications—

1. With the view of impressing the system; as a substitute for the stomach, as in the case of medicines disagreeing with that organ, or where the system is inordinately or disagreeably impressed by a medicine when given by the stomach; and where it is difficult or impossible to get a patient to swallow medicines.

2. When we want an additional mode of medication to promote a rapid impression.

3. To act upon the rectum and bowels specifically. Cases stated where it is important and requisite to accomplish each of these purposes.

When *fluids* are used by the rectum and bowels, they are called *enemata*, *clysters*, *lavements*, and *injections*. They may be either simple or medicated.

The quantity used varies according to the intention. When the design is to impress the system, there must be retention, and

the injection used should therefore be small in quantity and unirritating. Mucilage in some form is usually employed as the vehicle, and the bulk of it varies, with the age, from f℥j to f℥j. The dose of the medicine to be employed is usually stated to be three times greater than that by the stomach. This rule of augmentation is not to be absolutely followed, as there are exceptions; and even with respect to some medicines the reverse may be necessary. Orfila's statement with respect to opium and tobacco.

If the design be to act upon the bowels, large quantities are to be used, but the amount proportioned to the age. For an adult a pint is usually directed, but larger quantities are sometimes required. An infant requires an ounce or more; a child of five years, three or four. Advantages and disadvantages of employment. Mode of forming injections, and the instruments employed for their administration.

Solids introduced into the rectum are called *suppositories.* Substances used, and the intention. Gases are sometimes used. The modes of using them.

III. *Urethra and Bladder.*—These organs are simply used for the local impression to be made upon them.

IV. *Vagina.*—This is used both to make a local impression and impress the system. The treatment of the diseases of females presents numerous cases in which medication is directed to this organ.

V. *Nostrils* and *Bucco-Guttural Mucous Membrane.*

VI. *Lungs.*—Substances are introduced into the lungs to make a local impression in the case of disease located in them, or to act on the system generally. They must be in the form of impalpable powder, or in that of vapor. Method of treatment based on the local impression, and the diseases to which it is applicable, stated.

To produce an impression upon the system, the substances inhaled must be absorbed. Instances of such impression given. The great relative absorbing power of the lungs exhibited, and the reasons given why the introduction of vapors by these organs is more rapid and their effects more profound.

Inhaling apparatus, and methods of using them.

VII. *Skin.*—The skin is constantly used as a portion of the body to which medication is directed. There are three modes by which this method is carried out: 1st. By *simple application.* 2d. By *friction.* 3d. To the *surface denuded of cuticle.*

The *first*, or simple application, is called the *Enepidermic Method.* All the applications made to the skin in the form of *cataplasms* or *poultices*, *fomentations*, *baths*, *lotions*, *plasters*, *blisters*, &c., come under this denomination.

One indication with which applications are used is to relax, soften, and induce a perspirable condition of, the skin. The active agents are *heat* and *moisture.* The best substances to secure these effects indicated, and the advantages and disadvantages of the several poultices pointed out. Cases stated of the advantage derived from their use.

Another indication is to relieve pain; hence sedative applications of the same kind are highly useful. The use of poultices by the surgeon explained. The nature of fomentation, and the modes of practising it, presented.

The use of baths, the advantages and disadvantages of their employment. The kind of baths, which, when partial, are called *semicupium*, or *hip bath*, and *pediluvium*, or *foot bath.* The *temperature* of baths. *Vapor baths.* The mode of giving them, and danger from incautious use.

A third indication for applications to the skin is to refrigerate. The use of cold water, and of cold lotions explained.

They are further used to strengthen the system, as in the case of astringent baths, or locally to give force and tone. Remarks illustrative of these effects. Or to impress a part by decided medication, as by alteratives, which may act upon the part, or moderately on the system.

Finally, they are used to *stimulate.* Advantages of such stimulation shown.

The *second* species of application, or that by friction, is called the *Iatraleptic Method.* This is founded in a measure upon the absorption of substances by the skin. Proofs of such absorption. This method is used to act locally or to impress the system. Parts pointed out where absorption can take place with most facility. Articles employed and the indications fulfilled.

Examples of local and general impression. This method is also used for mere local stimulation or revulsion.

The *third* method of acting through the medium of the skin is termed the *Endermic Method.* The skin is deprived of the cuticle, as by its removal a greater power of absorption is communicated. This mode of medication is much employed in the treatment of diseases. The substances best fitted for this mode of employment are such as are very active, such as operate in small dose, and such as are soluble and not corrosive.

The skin is prepared by the application of a blister. Advantages of the blister, and the method of applying and dressing it. Caution required in applying articles to the blistered surface.

Other modes of removing the cuticle, and their disadvantages.

The design of employing the endermic method is to save the stomach, to assist medication of the stomach, and to act locally with more force than by simple inunction. Revulsion is conjoined in this way with medication. Examples given of these several indications. The amount of the medicine used is double or treble that by the mouth. Caution as regards an inordinate quantity.

PHARMACY.

As Medicines are brought in the crude state, it becomes necessary to adapt them to the purposes of exhibition; to give to them such forms as suit the different organs to which they are to be applied. To accomplish this, the operations of pharmacy are called into requisition. Pharmacy may de defined to be the *art of preparing medicines for use.*

The necessity of this art being thoroughly understood by physicians insisted on.

As exactness is essential to the operations of pharmacy, *weights* and *measures* should be understood. Remarks on weights and measures. *Avoirdupois Weight. Troy Weight.* Modification of the latter, called *Apothecaries' Weight.* Divisions of it.

The necessity exemplified of adhering to this as the uniform standard in preparing and compounding medicines.

Apothecaries' or Wine Measure; divisions; instruments; graduated measures, &c.

Drops.—Causes of variation.

MEDICINAL FORMS.

For the proper administration of medicines, certain forms are communicated to them which appertain to the subject of *preparations.* These are either *liquid, solid, semi-liquid,* or *semi-solid.*

The fluid preparations vary according to the menstruum or fluid which may be employed.

A common menstruum is water. Alcohol, ether, wine, and vinegar are also employed.

The *liquid preparations* are decoctions, infusions, solutions, medicated waters, mixtures, syrups, honeys, oxymels, vinegars, tinctures, wines, spirits, ethers, and oils.

The *solid preparations* are powders, pills, confections, extracts, troches, ointments, cerates, plasters.

The *semi-fluid preparations* are fluid extracts.

The *semi-solid preparations* are liniments.

Decocta, U. S.—*Decoctions* are made by boiling in water for a longer or shorter time the substances from which they are to be prepared. This mode is generally regarded as a powerful one of extracting the virtues of medicinal articles. In some cases objectionable. The grounds of objection specified. Necessity of filtration and preservation from the air. Liability to change.

Infusa, U. S.—*Infusions* are made with water, cold or hot, without ebullition. May be made by maceration or digestion. Facilitated by the displacement process. Cold infusion best adapted to substances containing volatile ingredients. Examples cited. Pure water required; reasons for this. Preparation of substances for the preparation of infusions.

Displacement.—Filtration.

Liquores, U. S.—*Solutions* are preparations in which substances are simply dissolved in water. Examples.

Aquæ Medicatæ, U. S.; *Medicated Waters.*—These usually contain a volatile oil, or gaseous matter.

Misturæ, U. S.—*Mixtures* are preparations which contain medicinal articles in suspension and not necessarily in solution. The articles should of themselves be miscible, or capable of becoming so by the intervention of others. Kind of articles adapted to this form stated. Mixtures may be either *simple* or *compound;* well adapted for extemporaneous prescriptions. Modes of exhibition.

Syrupi, U. S.—*Syrups* are sugary solutions of the active principles of medicines. The menstruum used may be water, or water with alcohol added, or vinegar. Strength of syrups; inconvenience of their being too strong or too weak.

Clarification.—Causes of fermentation.

Mellita, U. S.—These are preparations made with honey. *Oxymels* are placed under this denomination by the *U. S. Pharm.*

Aceta, U. S.—Vinegars are made with acetic acid or vinegar, which is a convenient solvent for some principles. Reasons for its advantageous employment. Kinds of acetic acid used.

Tincturæ, U. S.—*Tinctures* are alcoholic solutions of active principles. Advantages of alcohol as a menstruum. *Alcohol*, U. S., is employed for some tinctures, while *Alcohol dilutum*, U. S., is more convenient for others. Reasons for this. Mode of preparing tinctures.

Alcoolatures.

Vina, U. S.—*Wines* are solutions in wine. The wines used.

Spiritus, U. S.—*Spirits* are alcoholic solutions of volatile principles, and are prepared either by distillation, or by maceration, or simple solution of the principles.

Ætherea, U. S.; *Ethers.*—This kind of preparation requires the action of acid or analogous principles on alcohol.

Olea Destillata, U. S.—The *Distilled Oils* are prepared by distillation. *Fixed Oils* by expression. Examples.

Pulveres, U. S.; *Powders.*—Most dry substances can be reduced to the powdered state, which renders them convenient for manipulation. Modes of powdering. Levigation, elutriation.

Some substances lose their virtues in the powdered state; hence the necessity of careful preservation. Objection on account of the more easy adulteration.

Modes of administering powders. Simple and compound powders.

Pilulæ, U. S.; *Pills.*—One of the most popular forms of administering medicines. Advantages; mode of making pills, and nature of the articles used as excipients. Care should be taken that these are not chemically incompatible; they are sometimes selected to promote the operation. Kind of articles to be made into pills. Size and weight of pills.—Bolus, a large pill.

Confectiones, U. S.; *Confections.*—In these the medicinal substance is beaten up and mixed with sugar or syrup. *Conserves* and *electuaries*, *linctus.* Uses.

Extracta, U. S.—*Extracts* are of two kinds, *solid* and *fluid.* Modes of preparing them; menstrua; caution in their preparation; composition; uses.

TROCHISCI, U. S.; *Troches.*—These are sweet gummy pellets, which dissolve slowly in the mouth. They are also called lozenges, *simple* or *medicated;* uses.

UNGUENTA, U. S.—*Ointments* are soft, viscid, fatty substances, intended for external application.

CERATA, U. S.—*Cerates* differ from ointments in being more consistent; they essentially contain wax.

EMPLASTRA, U. S.—*Plasters* are solid preparations, which are spread by heat, and which are adhesive at the temperature of the body. Substances from which plasters are prepared. Uses, mechanical support, local impression, and slow action on the system. Mode of spreading plasters.

LINIMENTA, U. S.—*Liniments* are of a fluid or semifluid consistence, intended for external application, and frequently applied by friction. They are used either to soothe the parts to which they are applied, or to stimulate. Uses and application of liniments.

CLASSIFICATION.

Remarks on classification in general, and an exposition of the advantages to be derived from it. The several systems stated and commented upon. Their suitableness for the purposes to which they are applied pointed out. Preference given to a *physiological classification.* Its fitness to aid instruction exhibited; at the same time that it does not prevent the exposition of the natural history and chemical affinities among articles of the materia medica.

With slight modification, the arrangement proposed by Dr. Wood will be adhered to. See Table.

TABULAR VIEW OF CLASSIFICATION.

I. Substances which act on the Solids and Fluids of the Body.

General Remedies.

- **Stimulants**
  - Permanent
    - Astringents,
    - Tonics.
  - Diffusible
    - Arterial,
    - Cerebro-nervous
      - Nervous,
      - Cerebral,
      - Excito-motor.
- **Sedatives**
  - Arterial,
  - Nervous.
- **Alteratives.**

Local Remedies.

- **Affecting functions**
  - Emetics,
  - Cathartics,
  - Diuretics,
  - Diaphoretics,
  - Expectorants,
  - Emmenagogues,
  - Sialagogues,
  - Errhines.
- **Affecting organization.**
  - Epispastics,
  - Rubefacients,
  - Escharotics.
- **Operating mechanically.**
  - Demulcents,
  - Emollients,
  - Diluents.

II. Substances which act on Foreign Matter in the Body.

Antacids.
Anthelmintics.

ASTRINGENTS.

ASTRINGENTS are substances which, when applied to the tissues of the living body, cause them to contract, and, as a consequence, increase their firmness and density.

They produce their effects *partly* through the medium of the organic contractility. This property is capable of being called into activity by appropriate stimuli, and among them astringents are very potent. This mode of operation is vital or *dynamical.*

Difference pointed out between organic contractility and muscular.

Another mode by which astringents produce their effects is *chemically.* This, however, is different from the action of chemicals on dead animal matter, because it is under the control of vitality. Coagulation takes place only to a limited extent, and can be removed by the vital action. If a complete destruction of life in a part were to follow their application, it would be superficial cauterization, and the coagulum, instead of being absorbed, would be thrown off. A ground of difference is here presented between cathæretics and astringents.

The absorption of a coagulum, produced from the protien elements of the tissues and of the blood, is accomplished by the chemical agents in the humors of the body.

The exact impression made by many substances which come under the denomination of astringents, will depend on the amount used, and on the state of the part to which applied. Instances given.

The dynamical effect of astringents has been supposed to depend upon the chemical impression; this, however, in all cases, is very difficult to be determined, and the belief may be entertained that it is distinct.

The coagulum of the elementary principles of the tissues may depend upon several affinities. These specified. There is a difference in the solubility of the coagulum which modifies the effects; and some coagulating substances appear to contain within them the requisites of subsequent solution.

Astringents are not confined to a local impression; they may act dynamically, and even chemically, upon the whole system, by their introduction into the circulation. Evidence of their introduction into the circulation; derived from action on remote organs; from their appearance in the urine, &c.; and from alteration in the characteristics of the blood.

The evidences of the action of this class of bodies are appreciable by the senses; as obvious shrinking and contraction occur, with diminution of secretion. The lips, tongue, and fauces manifest this condition, as well as ulcerated surfaces. The same impression is made upon the interior organs.

They may be said to be directed especially to the actions and functions of organic life, and but indirectly to those of animal life. Resemblance and points of difference between them and tonics. Illustrations derived from some articles of the two classes.

The action of astringents is modified by the part to which applied, its condition, and the amount employed, as well as by the character of the article.

Astringents are employed *first*, in diseases connected with unhealthy discharges, whether secretory or hemorrhagic. Diseases specified. They should be employed in accordance with certain therapeutic rules, or they may be used injuriously. The stage of disease and sympathetic disturbance of the system must direct their employment. Excitement and fever forbid their use. Illustration by examples.

Other cases of disease where they are improper, and danger from using them.

They are employed, *secondly*, in affections depending on relaxation of tissue. This may be general or partial. If general, it is connected with constitutional disease. Affections in which it occurs specified. Where it is local, it is the result usually of inflammation or injuries. The periods of inflammation when

astringents are indicated, are either the commencement or termination of it. Explanation of their advantages at these periods. For the most part, the topical use of them is not attended with the objections which hold with regard to their internal use.

Reason why the internal use with the view to an impression upon remote parts may be defeated.

The *third* object for which astringents are used is to correct putrefaction. Examples of their use with this design.

Astringents are of two kinds, *Vegetable* and *Mineral*. The first owe their properties to a peculiar proximate principle, *tannin;* while the second, having no principle in common, are endowed with powers which belong exclusively to each one of them.

VEGETABLE ASTRINGENTS.

ACIDUM TANNICUM, *U. S.*

Tannic Acid.

Tannin.—The proximate principle of the vegetable astringents. Obtained most conveniently from powdered galls. Mode of obtaining it. Form; sensible properties; solubility. Chemical characteristics. Two kinds; one striking a *blue-black* precipitate with the salts of iron; the other a *green-black*. Source of each.

Incompatibles.

The compounds formed by the union with bases called *Tannates*. Character of the precipitate formed by each kind on animal matter. Tests.

Acidum Gallicum, U. S.; *Gallic Acid.*—Mode of formation; form; appearance; sensible properties. Difference between it and tannin. Advantages of employing these principles. Dose of either grs. ij to grs. v. 3 or 4 times daily

GALLA, *U. S.*

Galls.

Nut Galls.—Morbid excrescences upon the *Quercus infectoria*, produced by the puncture of an insect, the *Cynips quercûsfolii*. Description of the tree. Place of growth, Syria and Asia Minor.

Mode in which the gall is formed. Two kinds, *blue* and *white;* characters of each; sensible properties; why called Aleppo galls. Chemical composition.—Tannin exists in them in large quantity.

Character as an astringent. Uses in medicine. Antidotal powers.

Administration.—In *powder*, dose grs. x to xx. *Infusion* made in the proportion of ℥j to boiling water Oj. Dose, f℥ss to f℥ij.

Tinctura Gallæ, U.S.—Made with galls, ℥ij to Oj alcohol. Used as a test. Uses as a gargle.

Unguentum Gallæ, U.S.; *Ointment of Galls.*—Prepared by mixing finely powdered galls ℥j with lard ℥vij. Uses; objection, and substitution of the *aqueous* extract. Articles with which it may be combined.

Syrup of Galls.—Preparation. Uses.

QUERCUS ALBA, *U.S.*

White Oak Bark.

QUERCUS TINCTORIA, *U.S.*

Black Oak Bark.

The barks of *Quercus alba* and *Quercus tinctoria* alone are officinal, but others are used. Remarks on the genus Quercus. Description of the officinal species.

Characters of the bark and sensible properties. Relation to water.

Mode of preparation for use.

Black oak bark called *quercitron.*

Prominent principle *tannin.*

Medical Application.—Most commonly used for local application. Modes of employment.

The coarse powder used for poultices.

Dose in powder, grs. xx to xxx.

Decoctum Quercus Albæ, U.S.; *Decoction of White Oak Bark.*—Made by adding white oak bark ℥j to water Oiss, and boiling to a pint. Dose, f℥j to ij.

An extract has been prepared. Dose, grs. x to xx.

Incompatibles.

The fruit (acorn) has been used. It contains starch, bitter principle, and tannin. Prepared by roasting; changes produced by this operation. Used in scrofula.

CATECHU, *U. S.*

Catechu.

The extract of the wood of the *Acacia catechu*, a tree of some size, a native of British India and other provinces of the East. Supposed at one time to be an earth, and called *Terra japonica.*

Mode of preparation.

Forms which it presents in the market, and the varieties; sensible qualities; purity; solubility.

Another kind from the *Uncaria Gambir.* Mode of preparation. Form. Characters and sensible properties.

Contains tannin, and a principle called *Catechuic acid.*

Incompatibles.

Medical Application.—Diseases in which serviceable. For internal administration the dose is grs. x to xx of the powder.

Infusum Catechu Compositum, U. S.; *Compound Infusion of Catechu.*—Mode of preparing. Dose, f℥ss to j.

Tinctura Catechu, U. S.; *Tincture of Catechu.*—Mode of preparing. Dose, f℥i to ij. Advantages over *Tincture of Kino.*

Troches of Catechu.

KINO, *U. S.*

Kino.

The inspissated juice of a tree, which is called *Pterocarpus marsupium*, and derived also from other plants.

There are four varieties, African, Jamaica, Botany Bay, and East Indian.

1. *African*, derived from the *Pterocarpus erinaceus.* Locality. Tree. Rare.

2. *Jamaica*, derived from *Coccaloba uvifera.* Description of plant. Mode of obtaining the substance. Mode in which it is brought into the market. Characters.

3. *Botany Bay*, derived from the *Eucalyptus resinifera.* Plant. Rare article.

4. *East Indian.* The commonest kind. Derived from *Pterocarpus marsupium.* Mode of procuring it. Source, the Malabar coast of India. It comes from Bombay.

Characters; sensible qualities; odor; taste. Powder. Solubility in water and alcohol. Appearance of the solutions.

Contains tannin, kinoic acid, and extractive.

Incompatibles.

Medical Application.—A mild astringent, used internally and externally. Uses.

Dose in substance, grs. x to xx.

Infusion or Solution used. Made in the proportion of ʒij to water fʒvj. Dose, fʒss.

Tinctura Kino, U.S.; *Tincture of Kino.*—Mode of preparing it. Precautions; and necessity of recent preparation. Uses. Dose, fʒj to ij. Used in combination.

KRAMERIA, *U.S.*

Rhatany.

The root of the *Krameria triandra*, a native of the west coast of South America. Description of plant. The West India species, *Krameria ixina.*

Characters of the root; sensible qualities; smell; taste. Part which is active. Color of powder.

Imparts its virtues to water and alcohol.

Contains tannin.

Medical Application.—An excellent astringent, used in cases of diarrhœa, chronic dysentery, and hemorrhages. Also in other affections.

The dose in powder, grs. x to xx.

Infusum Krameriæ, U.S.; *Infusion of Rhatany.*—Mode of preparation by macerating. Dose, fʒj to ij. Better made by displacement.

Extractum Krameriæ, U.S.; *Extract of Rhatany.*—Made by displacement with cold water. The advantages of this mode, and remarks on the samples met with. Given in pills or powder. Dose, grs. x to xx.

Tinctura Krameriæ, U.S.; *Tincture of Rhatany.*—Mode of making it; an elegant preparation. Dose, fʒj to ij.

Syrupus Krameriæ; *Syrup of Rhatany.*—Made from the extract. Mode of preparation. Dose, f℥j to f℥ss.

HÆMATOXYLON, *U. S.*

Logwood.

The inner or heart wood of the *Hæmatoxylon campechianum.* Description of the tree. Native of West Indies. Characters of the wood; appearance; density; color; effects of exposure; odor; and taste. Appearance of the coarse powder.

It contains tannin, and a red coloring principle, *hæmatin.*

Relation to water and alcohol.

Incompatibles.

Medical Application.—Belongs to the mild astringents. Used in light cases of bowel complaint, and adapted to children.

Given in *infusion* made with ℥j to Oj hot water.

Decoctum Hæmatoxyli, U. S.; *Decoction of Logwood.*—Mode of preparation. Dose f℥j to f℥ij.

Extractum Hæmatoxyli, U. S.; *Extract of Logwood.*—Mode of preparing. Remarks. Dose, grs. x to xx.

GERANIUM, *U. S.*

Cranesbill.

The rhizoma of the *Geranium maculatum.* Description of plant. Indigenous. Localities.

Characters of root; sensible properties; odor; taste. When gathered. Relations to water and alcohol.

Contains tannin and gallic acid.

Medical Application.—To what uses adapted. Powder used. Dose, grs. x to xx.

Infusion.—Mode of preparing. Dose, f℥j to ij.

Decoction.—Objections. Used in milk.

Extract.

Tincture.

RUBUS VILLOSUS, *U. S.*

Blackberry Root.

RUBUS TRIVIALIS, *U. S.*

Dewberry Root.

Description of these plants. Localities. Characters and sensible properties of the roots. Contain tannin.

They yield their properties to water.

Used in powder prepared from the cortical portion. Dose, grs. x to xx, or in Infusion or Decoction. Mode of preparing these, and dose.

Medical qualities of the fruit.

TORMENTILLA, *U. S.*

Tormentil.

The root of *Potentilla tormentilla*, a small plant, a native of Europe, sometimes called *septfoil*. Description of the plant. Characters of the root and sensible properties. Contains tannin.

Relations to water.

Uses. Dose in powder, ℈j to ʒss.

Infusion.

Decoction.

UVA URSI, *U. S.*

Uva Ursi.

The leaves of the *Arctostaphylos uva ursi*. *Bearberry*. A native of this country, and Northern Europe and Asia.

Description of the plant.

Time when the leaves are gathered.

Characters; sensible properties. Adulteration.

Powder. Relations to water and alcohol.

Contain tannin, bitter extractive, and resinous matter.

Medical Application.—Astringent and tonic, having a direction to the kidneys. Cases in which used. Given in powder. Dose, ℈j, three or four times daily. Infusion by displacement.

Decoctum Uvæ Ursi; *Decoction of Uva Ursi.*—Mode of preparation. Dose, fʒij.

CHIMAPHILA, *U. S.*

Pipsissewa.

The leaves of *Chimaphila umbellata*, *Wintergreen*, a small plant; synonym, *Pyrola umbellata*. Description of the plant.

Leaves used; characters; form; surface; odor; taste. Distinguished from those of *Chimaphila maculata*. Mode in which it is brought into the market.

Contains tannin, extractive, &c. Relation to water.

Medical Application.—Astringent, tonic, and acting on the urinary organs. Particulars in which it differs from Uva Ursi. Especial cases to which adapted. Mode of exhibition. Infusion by displacement—mode of preparing.

Decoctum Chimaphilæ, U. S.; *Decoction of Pipsissewa.*—Mode of preparation. Dose, f℥ij to iv, two or three times daily.

An extract and syrup have been proposed.

Made sometimes into Beer.

ROSA GALLICA, *U. S.*

Red Roses.

The petals of *Rosa gallica.*

The plant is a native of Europe, but introduced. The buds are used for medicinal purposes. Time when gathered.

Characters and sensible properties.

Contain tannin and volatile oil.

Medical Application.—A mild astringent. Used in infusion. Mode of preparation.

Infusum Rosæ Compositum, U. S.; *Compound Infusion of Roses.*—Mode of preparation. A refrigerant as well as astringent. Cases to which applicable. Other uses as a vehicle. Dose, f℥j—ij.

Confectio Rosæ, U. S.; *Confection of Roses.*—Mode of formation. Uses, to form pills, and as a vehicle.

Mel Rosæ, U. S.—Mode of preparing. Employment.

ROSA CENTIFOLIA, *U. S.*

Hundred-leaved Roses.

The petals of the *Rosa centifolia;* an introduced plant.

Characters and sensible properties.

Valuable on account of the volatile oil.

AQUA ROSÆ, U. S.; *Rose Water.*—Uses.

UNGUENTUM AQUÆ ROSÆ; *Ointment of Rose Water.—Cold Cream.* Mode of preparation. Uses.

GRANATI FRUCTUS CORTEX, *U. S.*

Pomegranate Rind.

GRANATI RADICIS CORTEX, *U. S.*

Bark of Pomegranate Root.

The rind of the fruit, and bark of the root of *Punica granatum.* A small tree growing in hot climates. Localities.

Origin of name.

Characters and sensible properties of the rind. Relation to water. Contains tannin in abundance.

Characters of the root. Taste.

Flowers called *Balaustines.*

Most powerful astringent. Used in infusion or decoction. Mode of preparation, and dose. Application of the flowers.

DIOSPYROS, *U. S.*

Persimmon.

The unripe fruit of the *Diospyros Virginiana.* Medical application.

POLYGONUM BISTORTA; *the Root.*—A native of Europe. Characters and sensible properties, and application.

The mineral is called Native alum
is found on the Mayflower – the mineral
from which it is procured is called Aluminous
Slate – or Bituminous Slate – which varies some-
what in composition in different localities, but
always contains Sulphuret of Iron, Alumina,
Carbon & sometimes a salt of potash –
The sulphur attracts O & is converted into SO^3 which combines
partly with Iron & partly with Alumina. The solution
of Sul^{ate} by lixiviating the decomposed solid is evaporated
the last of the alum is crystallized : to –
[illegible] it is dissolved in cold water – then in its own
wt. of boiling water –
In small doses astringent – In large doses irritating poison
Emetic –

Galena ore = Sulphate Lead
Obtained from western Pennsylvania
mines Arkansas + 10 miles of Galena

Pure water should not be con-
ducted through Leaden pipes

In small doses Lead acts as an
astringent on the Alimentary canal
& also checks secretions

MINERAL ASTRINGENTS.

ALUMEN, *U. S.*

Alum.

Chemical composition; hence called *Sulphate of Alumina and Potassa.* Varieties of alum.

Found native, or manufactured. Manner of formation from alum ore. Rationale.

Form of the salt. Sensible properties. Taste.

Solubility in water. Effects of heat upon it.

Incompatibles.

Medical Application.—Astringent and coagulator of albuminous elements. Action as an astringent.

Action on the stomach in small and large doses.

Uses in hemorrhages, &c., chronic inflammations, &c.

As an emetic. Other applications.

Dose in powder, grs. v to xv. Mode of employment. Used in solution as a gargle. *Alum curd, Cataplasma aluminis.*

ALUMEN EXSICCATUM, U. S.; *Burnt Alum.*—Mode of preparation. Employment.

Alum Whey.

PLUMBUM.

Lead.

Known to the alchemists as *Saturnus.*

Found native in several forms. The sulphuret termed *Galena.*

Pure lead is said to be innoxious. Uses.

Action of air and water upon it.

The preparations of lead act therapeutically, and also poisonously.

In small doses astringent, and sedative effects are produced by them. When long continued, a wasting effect is perceived. *Tabes Saturnina.*

The poisonous effects attributable to irritation, and to a peculiar specific impression. Lead colic.

Mode in which these are produced.

Evidences of a general lead impression upon the system. Effects of this impression. Disturbance of the nervous system. Effect upon the blood.

Proof of introduction into the vessels. Mode of this introduction.

Preparations which are most active. All capable of acting on the system.

Treatment of the irritative and general effects.

Antidotes.

Preparations of Lead.

PLUMBI OXIDUM SEMIVITREUM, *U. S.*

Semivitrified Oxide of Lead.

Litharge.—Mode of preparation; form; appearance; sensible properties; insolubility; attraction for carbonic acid; test.

Composition. Impurities.

Not used internally, but employed to form the

EMPLASTRUM PLUMBI, U. S.; *Lead Plaster.*—Mode of formation. Rationale.

Characteristics of lead plaster. Used in surgery. It constitutes the basis of other plasters, as *Resin Plaster* and

EMPLASTRUM SAPONIS, U. S.; *Soap Plaster.*—Mode of preparation, and uses.

GLYCERINA, U. S.—Employment.

PLUMBI CARBONAS, *U. S.*

Carbonate of Lead.

White Lead; Ceruse.—Method of preparation.

Properties; form; color; taste; solubility in water. Chemical composition.

Not used internally, but it is the most common cause of lead disease. Used cautiously as an external remedy. It is drying and astringent as a local application. Used in the form of powder or

UNGUENTUM PLUMBI CARBONATIS, U. S.; *Ointment of Carbonate of Lead.*—Mode of preparation. Uses.

A plaster is made from it.

Light yellow color

Destitute of odour—

Useful where we wish to lubricate
the surface as it absorbs the mo
ture from the Atmosphere—
When there are inordinate sound
in the ear, or deafness from the ea
being too dry may be relieved by th
introduction of a few drops

For healing sores by drying them up
but precaution must be used

Saponification —

... in oils that are acted on by a solution of caustic Alkali Hydrate unite with the fatty acid, forming a soap + disengage the glycerine which sometimes collects ...

Litharge —

... of lead with united to expel a ... part of air it rapidly oxidates ... protoxide of this metal — the oxidized ... a ... nomination Massicot — This ... at a slight red heat is ... separated from some ... acids ... the fused oxide forms, on solidifying, a brick red mass, ... readily separable into crystalline ... These constitute Litharge —

Crystals of Lead
Stained by the action of acetic acid
when Litharge
Sweet taste — inodorous

Soluble in water & Alcohol

Tannic acid —
Decomposed by the Alkalies —
Lime water — Tannate Lead } —
Liq: Plumbi Acetatis —
very good when the combined properties of Astringent & Sedative are both required as strongest and generally Stimulating
Its dispensing is should be combined with a little Opium Belond or Pecacuanha
In cases of Black tongue & Yellow fever
It is a prevention of hemorrhages from Stomach — The physician should be careful in its use as it is one of the substances that produce constitutional effects —

[illegible] media

[illegible]

[illegible] coagulates albumen —
Solution has a sweet taste & colorless — Must not [illegible]

PLUMBI ACETAS, *U. S.*

Acetate of Lead.

Saccharum Saturni.—Sugar of lead.

Mode of preparation, from oxides, carbonates, or the metal.

Occurs in crystals. Characters; taste; solubility. Facility with which it is converted into carbonate. Change in solution. Composition.

Incompatibles.

Medical Properties.—In small doses astringent and sedative. Uses in hemorrhages, in dysentery. Local sedative effects. Combinations. Effects of long employment. Necessity for suspending the administration when a certain quantity is given. Effects in large, and in excessive doses.

Antidotes. Dose, gr. ½ to iij, in pill. How to prepare the pill.

Use as a topical remedy. Objection in heated or highly inflamed surfaces. Effect on albumen.

Liquor Plumbi Acetatis; *Lead Water.*—Made in the proportion of ʒj to ij, to Oj of pure water.

LIQUOR PLUMBI SUBACETATIS, *U.S.*

Solution of Subacetate of Lead.

Solution of diacetate. *Goulard's Extract.*

Mode of preparation. Composition.

Characters; taste. Solution yields crystals on evaporation. proneness to undergo changes.

Incompatibles same as for acetate.

Uses as an astringent and sedative.

Necessity for dilution and formation of the

Liquor Plumbi Subacetatis Dilutus, U.S.; *Diluted Solution of the Subacetate of Lead.*—Strength. Cases in which useful.

Ceratum Plumbi Subacetatis, U.S.; *Cerate of Subacetate of Lead.*—Mode of preparation. Uses as a dressing.

It enters into the formation of the

Ceratum Saponis, U.S.; *Soap Cerate.*—Mode of preparation, and uses.

PLUMBI IODIDUM, *U.S.*

Iodide of Lead.

Formed by double decomposition between acetate of lead and iodide of potassium. Rationale.

Characters. Yellow powder. Solubility.

Combination with iodides; with potassa.

Capable of producing the effects of lead.

Uses, as a resolvent. Dose grs. iij—v.

PLUMBI NITRAS, *U.S.*

Nitrate of Lead.

Formed by the action of nitric acid upon the oxide. Rationale.

Characters. Solubility.

Poisonous effects.

In solution constitutes *Ledoyen's Disinfecting Fluid.* Uses. Mode of action.

CUPRUM.

Copper.

Metallic copper inert, but becomes active by combination. Readily combines with acids, and its activity in the stomach depends upon the presence of acid in the organ. Variation of effect from this cause.

In a healthy state of the system, no appreciable effects at first follow the exhibition of the preparations of this metal. In disease they are used with the view to an astringent, tonic, and in some cases, an alterative action. To be rendered apparent upon the organs or system, it is necessary that the exhibition should be continued for some time.

In large doses, the preparations of copper affect the stomach, and excessive quantities produce violent poisonous effects, with inflammation of the mucous membrane of the stomach. Symptoms of poisoning. Treatment.

Modes of inducing the poisonous action.

Acetate

Iodide of Lead —
is soluble in water or hot water al
in acetic acid
Inodorous with a metallic taste
In cases of Tumefactions of glan
& hypothetic de —

Formed by the action of Nitric ac
upon the semi-ethylid oxide of Le

Sweet acrid taste
Powerful styptic gr. 1/4

Plumbi Iodidum –

Take acetate of lead ʒiv – Iodide of Potassium ʒvij – Dissolve the acetate of lead in six pints of water & filter: to this add the Iodide of Potassium previously dissolved in 2 pints of water – Wash the precipitate & dry it – (Lond.)

Made by [illegible] ing, or stirring from Cobalt mine - also by oxidizing Cobalt [illegible] = The [illegible] of the Copper extract Oxygen from the air, & [illegible] Heavy Sulphuric Acid & the [illegible] of Copper, these by the [illegible] Sulphate of [illegible]

Cupri Ammonio Sulphas
2 eq Hydr. Sesqui
Carb Ammon

This powder is of a deep azure color by exposure to air it loses its ammonia.
Arsenious Acid precipitates a green arsenite of Copper = Potassa Soda, Lime water & the acids are incompatible with it.

Chronic poisoning from absorption. Symptoms.

Introduction into the circulation, and influence over the blood.

CUPRI SULPHAS, *U.S.*

Sulphate of Copper.

Native sources of the salt. Prepared by the manufacturer. Mode of preparation. Rationale. Called in common language *Blue Vitriol.*

Properties. Form of crystals; appearance; taste; effect of exposure; effect of heat; solubility in water. Composition.

Incompatibles. Action of ammonia.

Medical Properties.—In small doses, astringent, tonic, and antispasmodic. Uses. Dose, gr. $\frac{1}{4}$—$\frac{1}{2}$—j, three or four times daily, in pills.

In larger doses, emetic. Uses.

Used as a local astringent, and escharotic in chronic inflammations, mucous discharges, and exuberant growths.

Poisonous effects.

CUPRUM AMMONIATUM, *U.S.*

Ammoniated Copper.

Cupri ammonio-sulphas of the English colleges. *Ammonio-sulphate of copper.*

Mode of preparation. Rationale.

Properties. Color of powder; effect of exposure; odor; taste. Solubility.

Incompatibles.

Medical Properties. Employment. Dose, gr. $\frac{1}{2}$—3; made into pills.

ZINCUM.

Zinc.

Obtained in several native forms.

Remarks on the analogy between the preparations of this metal and those of copper.

ZINCI SULPHAS, *U.S.*

Sulphate of Zinc.

White Vitriol.—Mode of preparation. Rationale. An impure salt is made by roasting the sulphuret.

Form of crystals; color; taste. Solubility. Effect of exposure and heat. Composition.

Incompatibles.

Effect of ammonia.

Medical Properties.—Astringent; tonic; emetic. Application.

Tendency to act on the nervous system. Dose, gr. ½—2, in pill.

Local employment. Strength of solution.

Resemblance to Epsom salts and poisonous impression.

ZINCI ACETAS, *U.S.*

Acetate of Zinc.

Mode of preparation. Rationale.

Character of crystals; taste; effect of exposure; action of heat.

Medical Properties.—Astringent; in large doses, irritant. Much used as a topical remedy. Seldom used internally.

As an astringent wash or injection, grs. ij—x to f℥j water.

ZINCI OXIDUM, *U.S.*

Oxide of Zinc.

Flowers of Zinc.—How formed, as a sublimate; by precipitation.

Color of powder; destitute of odor and taste; non-solubility in water. Solubility in acids and alkalies; in albumen. Composition.

Medical Properties.—Feebly irritant. In small doses tonic. Locally applied, astringent, and desiccant. Uses.

Unguentum Zinci Oxidi, U.S.; *Ointment of Oxide of Zinc.*—Mode of preparation, and uses.

Zinci Sulphas.

1 eq Water 9 { 1 eq Hydrogen ——→
1 eq Zinc 32 { 1 eq Oxygen ——→ Oxide Zinc
1 eq Sulphuric acid 40 ——→ Sulphate

When heated it dissolves in its water of crystallization which gradually evaporates & by continued ignition the whole of the acid is expelled & the Oxide of Zinc left. If Ammonia be added to a solution a blue ppte will be the result provided any Copper be present

Zinci Oxid.

Made by dissolving Zinc in Nitric acid

Zinci Carb.

Aequi Carb Ammonia precipitate of Zinc
2 eq S. Carb Ammon. { 1 Carb. acid ——→
{ 2 eq Ammonia ——→ eq of ammonia
1 eq Sulph Zinc { 1 eq Sulphuric acid
{ 1 eq Ox. Zinc ——→ 1 eq Carb Zinc

Under the same circumstances Ammonia precipitates Zinc from its solutions as an Oxide. If the precipitation by Ammonia succeed — the Ca

by Sulph. acid_

TUTIA; *Impure Oxide of Zinc; Tutty.*—Mode of preparation. Characters. Uses.

CALAMINA, *U.S.*

Calamine.

Native impure Carbonate of Zinc.—Obtained from England.

The native calamine is in the form of lumps of a pink color.

From this is prepared

CALAMINA PRÆPARATA, U.S.; *Prepared Calamine.*—Mode of preparation.

Form; color; appearance. Change induced by heat in the native carbonate.

Liability to adulteration.

Used as a mild desiccative, and astringent agent; either in the form of dry powder, or

CERATUM CALAMINÆ, U.S.; *Calamine Cerate*, known as *Turner's Cerate.* Uses.

ZINCI CARBONAS PRÆCIPITATUS, *U.S.*

Precipitated Carbonate of Zinc.

Mode of preparation by double decomposition. Rationale.

Reason for introducing this preparation.

Color and appearance of the powder. Used to form

CERATUM ZINCI CARBONATIS, U.S.; *Cerate of Carbonate of Zinc.*—Preparation. Uses the same as of calamine cerate.

CADMIUM.

CADMII SULPHAS.

Sulphate of Cadmium.

Mode of obtaining it.

In the form of crystals; appearance; taste; solubility. Effects of exposure.

Composition.

Action on the economy. Resemblance to the sulphate of zinc. Topical employment.

TONICS.

These medicines, when properly administered, produce a gentle und persistent exaltation of the vital movements, and thereby give strength and vigor to the animal system.

The animal system is composed of solid elements in the tissues and organs, and of fluid elements which compose the blood. The latter are distributed to the organs, contributing to their formation. Besides the supply of blood, there must exist in the organs a power of appropriating its constituents; in this resides *nutrition*. Secretion and the production of heat are associated with nutrition. The power resident in the tissues of carrying on their vital operations, of maintaining their nutrition, has been termed tonicity, orgasm, and vital erection. Bichat separated it into two properties—organic sensibility, and organic contractility. These are connected with innervation.

Tonics influence the nutrition, and are, therefore, directed to the movements of organic life; but, as animal life is under the control of organic life, tonics have an influence over this also.

Muscular power has been confounded with tonicity of the whole body. It is one of the evidences of a tonic state, yet it is deceptive, as it may be exhibited, under excitement, where the tone of the system generally is feeble. Strength and health depend upon full nutrition of all the organs, and due excitement in them.

Tonics differ from astringents in effecting all the vital properties, instead of being restricted to contractility, and in increasing the nutritive qualities of the blood, as well as promoting its coagulability.

They differ from stimulants in the amount of excitement in-

duced, and additionally in producing power, while stimulants alone occasion increased action.

They are called *roborants*, *corroborants*, and *strengtheners;* but under all circumstances are not entitled to these appellations. Explanation of the circumstances under which they fail to increase strength. They are to be regarded as relative agents. And they are not to be regarded as strictly permanent.

The first impression is made upon the stomach, next upon the general system. Evidences of these two modes of operation.

Proofs of the introduction into the circulation.

The connection between bitterness and tonic properties discussed.

Tonics are used in cases of debility; this occurs where the vital forces are below the natural standard—where the functions are performed sluggishly—a condition dependent on imperfect nutrition. Mode of correcting this condition. It is met with in convalescence from acute disease; in nervous affections, &c.

Influence of impaired nutrition on the nervous centres. The irregular symptoms which are manifested. Necessity of not mistaking simulative for real disease in the different organs. Explanations and cases.

Effects in low forms of disease. In chronic diseases.

Deleterious impression, general, and local.

Division into *Pure Bitters*, *Peculiar Bitters*, *Stimulating Tonics*, *Aromatic Tonics*, and *Mineral Tonics*.

PURE BITTERS.

In this division are placed such articles as induce a roborant impression upon the stomach, increasing the appetite, and invigorating digestion, without any action upon the circulation, except from their prolonged employment. They possess tonic properties solely, and do not influence other organs except through the function of digestion. One of them may always be substituted for another. In large doses they nauseate, and may act upon the bowels.

QUASSIA, *U.S.*

Quassia.

The wood of the *Simaruba excelsa*, formerly *Quassia excelsa*. This tree has been likewise called *Picræna excelsa*.

Description of the Tree.—A native of Jamaica, called *Bitter wood.*

Quassia amara.—Description of this plant. The first from which quassia wood was obtained. A native of Surinam and the West Indies.

Properties of the wood. Form in which it comes; the appearance of the bark; size of billets; color of wood; texture; appearance of section; taste. Powder.

Adulteration.

Form in which kept in shops.

Active principle *Quassin.* Characters of the principal reagents. Relation to water and alcohol.

History of the discovery of this wood.

Medical Properties.—Pure tonic and stomachic, in large doses oppressing the stomach. Reputed influence on the nervous system. Uses.

INFUSUM QUASSIÆ, U.S.; *Infusion of Quassia.*—Strength. Dose, f℥i to ij. Mode of preparing extemporaneously.

TINCTURA QUASSIÆ, U.S.; *Tincture of Quassia.*—Preparation. Dose, f℥j to ij.

Advantages of using it.

EXTRACTUM QUASSIÆ, U.S.; *Extract of Quassia.*—Mode of preparation. Characters. Dose, grs. ij to v. Use as a vehicle.

SIMARUBA, *U.S.*

Simaruba.

The bark of the *Simaruba officinalis.*

Description of the tree. An inhabitant of Jamaica and the West India Islands, called *Bitter Damson.*

Bark of branches and root employed in medicine.

Properties. Form; appearance; taste.

Contains *Quassin.* Its relations to water and alcohol.

Quassia

a pure bitter tonic, does not excite the system; applicable in simple dyspepsia & in convalescence from acute disease

Kept in the shops in shavings or rasp[illegible]

An infusion is made by ʒii to Oj cold water; dose fʒi to fʒi [illegible] or four times day.

Apples

Are incompatibles are Tartaric Citric
Precipitable of Lead
Brought to market in leaves
& root — Leaves to be rejected —
Aromatic odour & rather bitter
taste — Contains no Tannic Acid
Therefore may be combined with
the Irons. To invigorate digestion

Gentian

Bitter sweet taste yields its virtues
to water & alcohol
It is the chief ingredient in the Holland prepara-
tion called by the same as quassia
Large tubular [illegible] brown
[illegible]

Employed in chronic Dyspepsia —

Medical properties similar to those of quassia. Uses.
Dose of powder, grs. x. Objection.
Given in *infusion*. Mode of preparing. Dose f℥j to ij. *Tincture.*

COPTIS, *U. S.*

Gold-Thread.

The root of *Coptis trifolia.*
Description of plant. An inhabitant of the United States.
Characteristics of root. Form; color; odor; taste.
Constituent, bitter extractive. Relations to water and alcohol.
Employment as a mild tonic, &c. Used in *infusion* and *tincture.*

GENTIANA, *U. S.*

Gentian.

The root of the *Gentiana lutea. Yellow Gentian.*
This is a beautiful plant of Europe, found in Alpine situations.
Description of plant.
Properties of the root. Size and shape of the pieces; external appearance and color; internal structure and color; odor and taste. Powder.
Contains *gentianin* and other ingredients. Characters of gentianin.
Effect of maceration and fermentation.
Medical Properties.—A powerful bitter. Effects of long use. Employment. Remarks on the *Portland Powder.* Combinations.
Dose of gentian in powder, grs. ~~x to xx.~~
Infusum Gentianæ, U.S.; *Infusion of Gentian.*—Preparation. Dose, f℥j to ij.
Infusum Gentianæ Compositum, U.S.; *Compound Infusion of Gentian.*—Constituents. Cases to which adapted. Dose, f℥j to ij.
Tinctura Gentianæ Composita, U.S.; *Compound Tincture of Gentian.*—Preparation. Dose, f℥j to ij.

Extractum Gentianæ, U. S.; *Extract of Gentian.*—Mode of preparation. Qualities. Application and combinations. Dose, grs. v to x.

Remarks on the *Gentianeæ*. Other species of *Gentiana* mentioned. *G. purpurea* and *G. punctata*. *American species.*

FRASERA, *U. S.*

American Columbo.

The root of the *Frasera Walteri*. Indigenous.

Description of the plant.

Properties of the root. Odor; taste.

Contains bitter extractive. Relations to *gentianeæ*.

Uses and modes of administration.

COLOMBA, *U. S.*

Columbo.

The root of the *Cocculus palmatus*.

Description of the plant. An inhabitant of the Mozambique coast of Africa. History.

Properties of the root. Form of the pieces; color and characteristic markings; fracture; odor; taste. Powder.

Adulteration.

Constituents, a peculiar principle *Columbin*, and starch.

Reagents. Relation to water and alcohol.

Medical Properties.—In small doses, tonic and sedative to stomach. In large affects the stomach. Employment.

Dose of powder, grs. x to xx. Decoction objectionable.

Infusum Colombæ, U.S.; *Infusion of Columbo.*—Preparation. Dose, f℥j to ij. *Cold infusion* preferable.

Tinctura Colombæ, U. S.; *Tincture of Columbo.*—Preparation. Dose, f℥j to ij.

SABBATIA, *U. S.*

American Centaury.

The herb of *Sabbatia angularis*. Indigenous. Description of plant. Herbaceous portion used.

Columbo

The root reaches us, from Mozambique and the S.E. coast of Africa, in slices, the cortical portion is of a light yellow & slightly greenish cast & covered with a brownish wrinkled cuticle: the medullary portion is light & spongy yellow, more or less abundant & marked with radiated lines & concentric circles — Aromatic odor, taste bitter — imparts virtues to water & Alcohol Constituents — Columbin, starch, [illegible] It is used in same cases as quassia & is perhaps milder & unirritating to the stomach

Gentiana

Imparts its virtues to water & Alcohol

Prunus Virginiana

This bark is obtained from
the stems branches & root — The fruit is brought
to market in jars of various sizes. The bark a
dark cinnamon color, brittle & fine grained; the
inner surface is pale colored & darkens by exposure —
Its odor is that of peach blossom. The taste bitter & aromatic,
& imparts its virtues to water & alcohol

Properties. Uses. Mode of administration and difference of effects from the manner of giving it. Infusion.

ERYTHRÆA CENTAURIUM; *Lesser Centaury of Europe.*—Character of the herb. Uses, and mode of administration.

EUPATORIUM PERFOLIATUM, *U. S.*

Thoroughwort.

Boneset.—The herb of *Eupatorium perfoliatum.* An indigenous plant. The flowering tops and leaves employed.

Two forms found in the shops.

Properties; odor; taste; liability to mouldiness.

Contains bitter extractive.

Menstrua to which it imparts its properties, water and alcohol.

Medical Properties. Uses; varied effects from mode of administration. Forms of administration.

INFUSUM EUPATORII, U. S.; *Infusion of Thoroughwort.*—Preparation. Dose, f℥j—ij.

Other species of *Eupatorium.*

PECULIAR BITTERS.

By this denomination are meant the bitter tonics which possess particular properties in connection with their tonic power, which render them available under circumstances calling for the exercise of these properties. Each one of them has peculiarities which are *sui generis.*

PRUNUS VIRGINIANA, *U. S.*

Wild Cherry Bark.

The bark of the *Cerasus serotina*, or *Wild Cherry.*

Description of the tree. Remarks on the anomaly presented by the name. The tree indigenous; variation in size.

The inner bark of the trunk and branches, or that of the root, is employed.

Properties of the bark; appearance; color; fracture; odor; and taste. Relations to water and alcohol.

It contains a bitter principle (extractive), tannin, and a peculiar principle *amygdalin.*

Characteristics of *amygdalin*, its reaction with emulsin, and the production of *hydrocyanic acid* and a *volatile oil.*

Proofs of the production of the acid and oil by this reaction.

Remarks on *Pruneæ* and *Amygdaleæ.*

Medical Properties.—Tonic and sedative; effects upon the pulse. Cases to which adapted.

Powder administered in dose of grs. x to xxx.

Decoction objectionable.

INFUSUM PRUNI VIRGINIANÆ, U.S.; *Infusion of Wild Cherry Bark.*—Mode of preparation. Advantage of cold infusion. Dose, f℥ij, or more, several times daily. Sometimes a few drops of an acid added.

SYRUPUS PRUNI VIRGINIANÆ, U.S.; *Syrup of Wild Cherry Bark.*—Mode of preparation. Characteristics. Uses. Dose, f℥ss.

CINCHONA, *U.S.*

Peruvian Bark.

The bark of different species of *Cinchona* from the western coast of South America.

History and introduction.

Names by which known.

Remarks on the genus *Cinchona.*

Species positively known to yield the barks of commerce, are: *Cinchona Condaminea*, *Cinchona micanthra*, *Cinchona Calisaya*, *Cinchona cordifolia*, and *Cinchona pitayensis.*

Description of these plants and their localities.

Botanical history.

Geographical position, elevation, temperature of the bark regions. Localities, *Loxa*, *St. Fe de Bogota*, *Huanuco*, *La Paz*, and *St. Martha.* Explanation of these several positions, and the source of the distinction between *Peruvian* and *Carthagena Barks.*

The Peruvian *officinal.* Carthagena *non-officinal.*

Mode of collecting and preparing the Cinchona bark.

Cinchona Flava—

has strong bitter taste, with little astringency & a fine odour. This variety contains more quinia than cinchonia & hence is the best. The powder is yellow or orange & almost in color

Cinchona Rubra

The color of powder is reddish brown—
has a bitter & astringent taste it is characterized by containing equal quantities of quinia & cinchonia—

The varieties of the Carthagena barks are the yellow Carthagena or common yellow bark, the brown & the red. These barks contain less quinia & cinchonia than the officinal & the active principles are quinia & cinchonia combined with kinic acid, tannin & coloring matter—

Classification. Different plans adopted; that of the sensible properties preferred. Geiger's chemical classification.

CINCHONA PALLIDA, U. S.; *Pale Bark.*—Name from the appearance of the powder. Form, that of quills.

It includes *Loxa bark* and *Huanuco bark.*

1. *Loxa Bark.*—Obtained from the *Cinchona Condaminea.* Quality. Known as *Crown bark.* Form; size of quills; mode of rolling; external appearance and color; inner surface; fracture; odor; taste.

2. *Huanuco Bark.*—Called sometimes *Lima bark.* Obtained from the *Cinchona micanthra.* By the English called *Silver Gray.* Size of quills. External appearance. Internal surface; fracture; odor; and taste.

CINCHONA FLAVA, U. S.; *Yellow Bark.*—Sometimes called *Royal Yellow.* Obtained from the *Cinchona Calisaya.* In two forms, quilled and flat.

1. *Quills.*—Size; external surface; internal appearance; peculiarity of the fissures and of the epidermis; structure; peculiarities of fracture; odor; taste. Parts of tree from which procured.

Powder.

2. *Flat Pieces.*—Size; form; color; structure; and fracture; relative value.

CINCHONA RUBRA; *Red Bark.*—Obtained from unknown species in two forms. Quills and flat pieces.

1. *Quills.*—Size; color. Manner in which rolled. External and internal surface; fracture; odor; and taste.

2. *Flat Pieces.*—Size; external aspect and variety; internal structure and color; fracture; variation in the layers.

Powder.

Carthagena Barks.—Varieties; distinctive characteristics.

Relative value.

Mode of packing the barks.

Chemical History.

Constituents, *Quinia*, *Cinchonia*, *Quinidia*, *Quinoidine*, kinic acid, &c.

Advantages of possessing the alkaloids.

Quinia.—Form and color; effect of heat upon it; solubility;

taste composition; reaction with acids. Tests. Source and mode of preparation.

Cinchonia.—Form; effect of heat upon it; solubility; taste; composition; reaction with acids; action of the atmosphere. Tests. Preparation.

Quinidia.—Form; characteristics. Tests. Preparation and source.

QUINIÆ SULPHAS, U. S.; *Sulphate of Quinia.*—Chemical constitution, a *Di-sulphate*. Form; appearance of the crystals. Effects of exposure. Action of heat. Complete destructibility. Solubility. Appearance in solution. Taste. Mode of preparation. Rationale.

Incompatibles. Adulteration, and means of detection.

Neutral Sulphate.—Mode of preparation.

CINCHONIÆ SULPHAS. *Sulphate of Cinchonia, Di-sulphate.* Form; appearance; solubility; conversion into *neutral* sulphate.

Quinidiæ Sulphas.—Mode of preparation and characters.

Kinic acid.

Effects and Application of Bark and its Preparations.—Effect upon the healthy system; not innocuous. Effects upon the nervous system. Effects in small doses. Tonic and antiparoxysmal effect. Effects in over-doses. Poisonous impression of sulphate of quinia.

Employment in intermittent fever. The questions discussed—

Should bark or its preparations be given before, during, or after the paroxysm?

In what doses ought it or its preparation to be given?—and how often should they be repeated?

By what varied means is the system to be brought under the influence of the medicine?

Objections which have been urged against the use of bark.

Employment in remittent fever; in typhus and adynamic fevers; in neuralgic and other affections.

Mode of administration. Dose in powder, ʒj, repeated every hour, until ℥ss—j has been given. Mode of mixing it; vehicles used; combinations and formulæ.

INFUSUM CINCHONÆ FLAVÆ, U. S.; *Infusion of Yellow Bark.*—Mode of preparing. Employment. Dose, fʒj to ij.

Quinæ sulphas

One ounce of bark equals eight grains of the sulph: Quinia — The sulphate is generally preferable to the bark because it does not disgust & sicken him in the same manner as the bark does, is also more convenient for the administration of large doses, and as a simple tonic is to be preferred —

Cornus Florida

His bark is of a reddish-gray & brittle, the epidermis is quite removed, the powder is reddish gray has a taste more & a better astringent ——— to taste — Yields its virtues to water readily

That from the red bark is also officinal.

Incompatibles.

An infusion also made from pale bark.

INFUSUM CINCHONÆ COMPOSITUM, U. S.; *Compound Infusion of Bark.*—Made from red bark. Mode of preparation, and ingredients. Chemical state of the active principles. Dose, f℥j to ij.

DECOCTUM CINCHONÆ FLAVÆ, U. S.; *Decoction of Yellow Bark.*—Mode of preparation. Reason of its turbidness. Effect of over boiling; comparative strength. Dose, f℥j to ij. A decoction made from red bark.

TINCTURA CINCHONÆ, U. S.; *Tincture of Bark.*—Mode of preparation. Dose, f℥j to ij.

TINCTURA CINCHONÆ COMPOSITA, U. S.; *Compound Tincture of Bark*, or HUXHAM'S TINCTURE.—Mode of preparation; ingredients; uses. Dose, f℥j to ij.

Remarks on the Tinctures.

EXTRACTUM CINCHONÆ FLAVÆ, U. S.; *Extract of Yellow Bark.*—Mode of preparation; properties. Dose, five to ten grains, in pill.

PILULÆ QUINIÆ SULPHATIS, U. S.; *Pills of Sulphate of Quinia.*—Mode of compounding them. Each pill contains gr. j of the sulphate. Caution with respect to old pills made with gum Arabic.

Solution of Sulphate of Quinia.—Advantages. Mode of effecting solution. Proneness to produce irritation.

Combination of sulphate of quinia with tannin.

Crude quinia.

Impure Sulphate. Quinoidine.

Endermic method of using bark and its salts.

CORNUS FLORIDA, *U. S.*

Dogwood.

The bark of the *Cornus Florida.* Description of the tree; an inhabitant of the United States.

The bark is derived from the root, trunk, and branches.

Appearance of the bark; form; color; fracture; odor; taste. Powder.

Contains bitter extractive matter, tannin, and some resinous principle.

Medical Properties as a tonic. Employed in intermittent fever. Objection to its use.

Dose in powder, ℈j to ʒj.

Decoctum Cornus Floridæ, U. S.; *Decoction of Dogwood Bark.*—Mode of preparation. Dose, fʒj to ij.

Other species of *Cornus.* Value.

Liriodendron Tulipifera, U. S.; *American Tulip Tree.*—Decoction. Employment.

The several species of *Magnolia.*

Remarks on the Poplars and Willows. *Salicine.*

STIMULATING TONICS.

These, in addition to tonic power, are possessed of stimulating properties, which render them available under certain circumstances. They owe their peculiarities to the union of the bitter principle with a volatile oil.

ANTHEMIS, *U. S.*

Chamomile.

The flowers of the *Anthemis nobilis.*

Description of the plant. A native of Europe, called in some countries *Roman Chamomile.*

Effect of cultivation. Structure of the flowers, and transformation.

Characters as found in the shops. Color; odor; taste. Relation to water and alcohol.

Contain bitter extractive and volatile oil.

Medical Properties.—Tonic and stomachic. Modification of action by mode of administration.

Rarely given in substance. Dose, ℈j.

Infusum Anthemidis, U. S.; *Infusion of Chamomile.* Mode of preparation. Dose, fʒij to iv.

Decoction and extract inappropriate. Reasons for this.

according as administered –

Other Compositeæ. *Anthemis cotula. Artemisia absinthium. Centaurea benedicta. Tanacetum vulgare.*

Rutaceæ.—*Ruta graveolens.*

SERPENTARIA, *U. S.*

Virginia Snakeroot.

The root of the *Aristolochia serpentaria;* of *A. reticulata* and other species of *Aristolochia.*

Description of these plants. Inhabitants of the middle and southern portions of the United States.

Properties of the root; form; appearance and color; fracture; odor; taste; varieties. Powder.

Yields its virtues to water and alcohol.

Contains bitter extractive, resin, and volatile oil.

Medical Properties.—Stimulating and tonic; action on the skin and kidneys. Effects of large doses. Employment. Dose of powder, grs. x.

Infusum Serpentariæ, U. S.; *Infusion of Virginia Snakeroot.*—Mode of preparation. Dose, f℥ss to ij.

Cold Infusion.

Tinctura Serpentariæ, U. S.; *Tincture of Virginia Snakeroot.*—Preparation. Dose, f℥j to ij. Uses.

MYRRHA, *U. S.*

Myrrh.

The concrete juice of the *Balsamodendron Myrrha.* A native of Arabia, also found in Africa. Description of tree.

Properties. Size and form of pieces; color; fracture; odor; taste; varieties. Color of powder.

Constituents, gum, resin, and a little volatile oil.

Relations to water and alcohol.

Medical Properties.—Tonic and stimulating, with a direction to the lungs and uterus. Employment; combinations.

Administered in pill or powder. Dose, grs. x.

In solution with water. Myrrh mixture.

Enters into the composition of the *Compound Mixture of Iron.*

Tinctura Myrrhæ; *Tincture of Myrrh.*—Mode of prepara-

tion; uses. Dose, f℥j to ij. Effect of mixture with water. Remarks on the necessity of using alcohol of the *U. S. Pharm.*

Pills of *Myrrh and Iron*, and of *Aloes and Myrrh.*

ANGUSTURA, *U. S.*

Angustura Bark.

The bark of the *Galipea officinalis*, and probably the *G. Cusparia.*

Description of plants. Inhabitants of the northern and eastern parts of South America. In the neighborhood of Angostura.

Form of the bark; character of the edges; external and internal surfaces; color; fracture; action of moisture; odor; taste. Relation to water and alcohol. Color of powder.

Contains bitter resin and volatile oil.

Medical Properties.—Tonic and stimulating.

Dose, in powder, grs. x to ℈j.

Infusum Angusturæ, U. S.; *Infusion of Angustura Bark.*—Mode of preparation. Dose, f℥j to ij.

False Angustura.—Source and characters; mode of distinguishing.

CASCARILLA, *U. S.*

Cascarilla Bark.

The bark of the *Croton Eleuteria*, also from the *Croton Cascarilla* according to some authorities.

Description of plants. Natives of the West Indies.

Two forms of the bark; appearance, and distinguishing marks. External surface, and internal fracture; odor; taste. Relation to water and alcohol.

Constituents. Bitter principle, resin, and volatile oil.

Medical Properties.—Tonic, stimulating, grateful to the stomach. Employment in fevers; in cases of children when teething, &c.

Infusum Cascarillæ, U. S.; *Infusion of Cascarilla.*—Mode of preparation. Dose, f℥j to ij.

Tincture not officinal, but a handsome preparation.

Used as an adjuvant to bitter infusions.

AROMATIC TONICS.

These are substances having a sweet, agreeable, penetrating odor, and a warm pleasant taste. Many of them come under the head of *Spices*, which, from their power of acting decidedly upon the organs, become medicinal agents.

They owe their properties to the existence of *Volatile Oils;* true vegetable proximate principles; sometimes they are called *Distilled and also Essential Oils.*

Odor; taste; volatility; specific gravity; inflammability; and relation of these oils to water and alcohol.

Substances for which they are solvents.

Composition; and action of the atmosphere upon them.

Adulterations, and means of detection.

Arrangement into classes.

All substances containing volatile oil are powerful stomachics, aiding digestion. Necessity of them in warm climates. Called *Carminatives.* Mode of action. More stimulating than pure tonics, and more local in their action than stimulants.

AURANTII CORTEX, *U. S.*

Orange Peel.

The outer rind of the fruit of the *Citrus vulgaris* or *Citrus aurantium;* the Bitter and Sweet Orange.

They grow in warm countries.

Rind of the Bitter; appearance; odor; taste. That of the Sweet destitute of bitterness.

The first contains bitter extractive and volatile oil; the latter only volatile oil. Relation to water and alcohol.

A tonic *infusion* may be made from the bitter; but it is generally employed as an adjuvant.

Confectio Aurantii Corticis, U.S.; *Confection of Orange Peel.*—Mode of preparation. Uses.

CINNAMOMUM, *U. S.*

Cinnamon.

The bark of the *Cinnamomum Zeylanicum and Cinnamomum*

aromaticum. Description of the plants, and remarks on the family of *Laurineæ*.

The first-named species is a native of the island of Ceylon; the second of China.

Ceylon cinnamon; mode of preparing, and commercial history. Qualities.

Properties; odor; taste.

Constituents, volatile oil and tannin.

Oleum Cinnamomi, U. S.; *Oil of Cinnamon.*—Mode of preparation. Properties. Action of atmosphere.

China cinnamon, commonly known as *cassia.*

Properties and distinguishing characteristics.

Medical Properties.—Tonic, stimulating, and carminative. Also astringent.

Uses as an adjuvant.

Dose, in powder, grs. x to ʒss.

An infusion made in the proportion of ʒij to Oj of water.

Aqua Cinnamomi, U. S.; *Cinnamon Water.*—Mode of preparation. Uses as a vehicle. Dose, fʒss to j.

Tinctura Cinnamomi, U. S.; *Tincture of Cinnamon.*—Dose, fʒss to ij. Uses.

Tinctura Cinnamomi Composita, U. S.; *Compound Tincture of Cinnamon.*—Ingredients, and mode of preparation. Employment. Dose, fʒss to ij.

Pulvis Aromaticus, U. S.; *Aromatic Powder.*—Composition. Uses.

CANELLA, *U. S.*

Canella.

The bark of the *Canella alba.*

Description of the tree. A native of the West Indies.

Mode of removing the bark and separation of the epidermis.

Form of pieces; appearance and color; fracture; appearance of the surfaces; odor; taste. Powder.

Relation to water and alcohol.

Contains an acrid volatile oil, resin, and bitter extractive.

Medical Properties. — Tonic and aromatic. Employment.

Cinnamon
Ginger + aromatics

Exciting, Tonic & Stimulant —
Bark imparts virtues to both carbon
& alcohol
Inertia, State of debility of stomach
&c &c —

Dose 10,15 & 20 grs - Sometimes administered for worms
Generally employed in combination with other tonics -

Wintera
Discd 70 yrs. ago Capt Winter - employed by him for Scurvy externally & internally.
May be used as a tonic having very beautiful effects in cases of Inertia of Stomach &c. Can be used in all cases where "Canella Alba" is beneficial

Nutmegs - Found in West India and South America

The clove is the undeveloped fruit.
ca. the unexpanded flowers -
Warm taste - owing to the presence of volatile oil -
If cloves is subjected to boiling water the oil will separate & there has a very pungent infusion with infusion gr. X -

Advantages in combination. Given in infusion or tincture. Enters into the

Pulvis Aloes et Canellæ, U.S.; *Powder of Aloes and Canella.*

Wintera, U.S.; *Winter's Bark.*—History and description of the tree called *Drymis Winteri.* An inhabitant of Patagonia.

Properties of the bark. Difference between it and Canella. Employment.

MYRISTICA, U.S.

Nutmeg.

The kernels of the fruit of the *Myristica moschata.* A native of the Molucca Islands, especially Amboyna and Banda.

Description of the tree and especially of the fruit.

History of the article.

Mode of preparing the nutmeg. Properties of good nutmegs; odor; taste.

Contains a fixed and a volatile oil.

Oleum Myristicæ, U.S.; *The Volatile Oil of the Kernels of the Fruit of the Myristica Moschata.*—Characteristics.

Macis; *Mace.*—The arillus of the fruit. Mode of preparing it for use. Properties; odor; taste. Contains a volatile oil and a fixed oil. Mode of obtaining them.

Medical Properties of the nutmeg. Uses as a stimulant and stomachic; narcotic property.

Dose, in powder, ℈j; of the oil, gtt. iij to v.

Employment of the fixed oil of mace.

CARYOPHYLLUS, *U.S.*

Cloves.

The unexpanded flowers of *Caryophyllus aromaticus*, called, by some botanists, *Eugenia caryophyllata.*

Description of tree. A myrtle. An inhabitant originally of the Molucca Islands, but has been distributed through the tropics.

Form of cloves; color; odor; taste. Relation to water and alcohol.

Contain volatile oil, extractive, resin.

Oleum Caryophylli, U.S.; *Oil of Cloves.*—Preparation; characters.

Medical Properties.—One of the most powerful of the aromatics. Used in infusion, or as an adjuvant.

Dose in substance, grs. v to x.

Infusum Caryophylli, U.S.; *Infusion of Cloves.*—Clove tea. Prepared with ʒij to Oj of hot water. Dose, fʒj to ij. Uses.

PIMENTA, *U.S.*

Pimento.

The unripe berries of the *Myrtus pimenta.* It is called also *Allspice* in commerce. A native of Jamaica and other West India Islands.

Description of the tree.

Berries. Form; aspect; color; odor; taste. Powder.

Contain an essential oil and resin.

Oleum Pimentæ, U.S.; *Essential Oil of Pimento.*

Characters. Dose, gtt. ij to v.

Medical Properties.—A stimulating aromatic. Employment. Uses as an adjuvant.

Spiritus Pimentæ, U.S.; *Spirit of Pimento.*—Mode of preparation. Dose, fʒij to ij. Uses.

PIPER, *U.S.*

Black Pepper.

The berries of the *Piper nigrum.* An inhabitant of Sumatra and the islands of the Eastern Archipelago.

Description of the pepper vine.

Characters of the unripe fruit.

Contains *piperin*, and a volatile oil.

White Pepper.

Medical Properties.—Powerfully stimulating. Employment. Uses as an adjuvant. Dose in substance, grs. v to x.

Dose of piperin, grs. ij to viij, given in pill. Activity as a medicine.

Extractum Piperis Fluidum, U.S.; *Fluid Extract of Black Pepper.*—Mode of preparation. Dose, fʒss to ʒj.

Pimento
Warm pungent + slightly bitter
sometimes used to adulterate
of of cloves

Black Pepper —
This is a vine that extends
itself 10 or 15 ft.
The oil may be obtained by
distillation + can be employed
au lieu de Black pepper

Cubebs—
Peculiar disagreeable odour
Bitter taste
Stimulant + diuretic
Much used in Gonorrhoae—not
to be used during the inflam-
mation as it will abort it + cause
disease + hernia of Testicle

Used as a carminative with a view
of toning the stomach—

CUBEBA, *U. S.*

Cubebs.

The berries of *Piper cubeba*. A native of Java and the East India Islands.

Description of plant.

Time at which the berries are plucked.

Characteristics. Form; external appearance; appendage; odor; taste. Powder. Effects of age upon them.

Contain a volatile oil, and cubebin.

Relation to alcohol and water.

Medical Properties.—Stimulating, with an especial direction to the urinary organs. Uses. Danger from improper use.

Dose of powder, ʒj. Mode of exhibition.

Pills with copaiba.

Oleum Cubebæ, U. S. Dose, gtt. xx.

Extractum Cubebæ Fluidum, U. S.; *Fluid Extract of Cubebs.*—Mode of preparation; advantages. Dose, gtt. xx to fʒj.

Tinctura Cubebæ, U. S.; *Tincture of Cubebs.*—Dose, fʒss—i.

Remarks on the *Piperaceæ*, and allusion to other species.

CARDAMOMUM, *U. S.*

Cardamoms.

The fruit of *Elettaria cardamomum*. A native of Malabar and the East Indies.

Description of the plant.

Capsules; form; color; construction; odor; taste. Appearance and form of the seeds. Powder prepared from the latter; liability to deteriorate.

Relation to water and alcohol.

Constituents, volatile oil, resin, and extractive.

Varieties of cardamom.

Medical Properties.—A warm and grateful aromatic. Employment as an adjuvant.

Dose of the powder, grs. v to x.

Tinctura Cardamomi, U. S.; *Tincture of Cardamom.*—Mode of preparation. Dose, fʒj to ij.

Cardamom enters into the *Confectio aromtica*, U. S., and *Pulvis aromaticus*, U. S.

ZINGIBER, *U. S.*

Ginger.

The rhizoma of *Zingiber officinale.* A native of the East and West Indies.

Description of the plant. Characters of the root.

Mode of preparing it for commerce. When dry, called *Black* and *Race* ginger. Imported from Calcutta.

Form; appearance; color; odor; taste. Powder.

White Ginger.—Source Jamaica. Manner of preparation. Properties. Powder.

Effect of worms in ginger.

Contains starch, volatile oil, resin.

Relation to water and alcohol.

Medical Properties.—Those of a grateful, aromatic stimulant and carminative. Employment. Uses as an adjuvant. External use.

Dose of powder, ℈j.

INFUSUM ZINGIBERIS, U. S.; *Infusion of Ginger.*—Made with ℥ss ginger to Oj boiling water. Dose, f℥j to ij.

TINCTURA ZINGIBERIS, U. S.; *Tincture of Ginger.*—An alcoholic solution of the oil and resin. Dose, f℥j.

SYRUPUS ZINGIBERIS, U. S.; *Syrup of Ginger.*—Made from the tincture. Used as a cordial drink, with water or mineral water.

CALAMUS, *U. S.*

Sweet Flag.

The rhizoma of the *Acorus calamus.* Indigenous. Also found in Europe.

Description of the plant.

Properties of the root; odor; taste.

Contains extractive and volatile oil.

Liable to be worm-eaten.

Medical Properties.—Warm, stimulant tonic. Employment.

Remarks on the UMBELLIFERÆ.

FŒNICULUM, *U. S.*

Fennel Seed.

The fruit of the *Fœniculum vulgare*, an inhabitant of the warmer countries of Europe, and introduced into this country.

Description of the plant.

Fruit; odor; taste; contains an essential oil.

OLEUM FŒNICULI, U. S. Properties.

Medical Properties.—Aromatic, stimulating. Employment in purgative infusions, and other preparations.

Dose of the oil, gtt. ij to v.

AQUA FŒNICULI, U. S.; *Fennel Water.*—Preparation. Employment.

CARUM, *U. S.*

Caraway.

The fruit of the *Carum carui*, a plant of Europe.

Description of plant.

Fruit; odor; taste. Owes its properties to an essential oil.

OLEUM CARUI, U. S.; *Oil of Caraway.*

Employment of *caraway* as an adjuvant.

Dose of oil, gtt. ij to v.

CORIANDRUM, *U. S.*

Coriander.

The fruit of *Coriandrum sativum.* Native of Europe. Introduced.

Fruit. Contains an essential oil. Employment as an adjuvant.

ANISUM, *U. S.*

Anise.

The fruit of the *Pimpinella anisum*, a native of Europe and Africa.

Fruit; odor; taste.

Contains volatile oil. Oleum Anisi, U. S.

Used as a flavorer.

Dose of oil, gtt. ij to v.

Star Anise, the seeds of the *Illicium anisatum*. A native of China.

Contains an oil so closely resembling the *oil of anise* as to be substituted for it.

Remarks on the Labiateæ.

LAVANDULA, *U. S.*

Lavender.

The flowers of *Lavandula vera*, a native of Europe. Introduced into this country.

Description of plant.

Flowers and tops. Odor.

Contain a volatile oil. Oleum Lavandulæ, U. S.; *Oil of Lavender.*

Spiritus Lavandulæ, U. S.; *Spirit of Lavender.*—Preparation by distilling the flowers with alcohol. An agreeable refreshing perfume.

Spiritus Lavandulæ Compositus, U. S.; *Compound Spirit of Lavender.*—Mode of preparing. Ingredients. An elegant cordial and carminative.

Uses; as a flavorer. Dose, f℥j.

ROSMARINUS, *U. S.*

Rosemary.

The tops of the *Rosmarinus officinalis*. A native of Europe, but introduced.

Description of plant.

Leaves and flowers. Odor.

Contain an oil. Oleum Rosmarini, U. S.

Spiritus Rosmarini, U. S.; *Spirit of Rosemary.*—Uses.

Enters into the composition of *Compound Spirit of Lavender*,

and of *Tinctura Saponis Camphorata*, U. S., and *Linimentum Saponis Camphoratum*, U. S.

SALVIA, *U. S.*

Sage.

The leaves of *Salvia officinalis.*

Contains an essential oil and tannin.

Used in infusion. Internally as an aromatic astringent and tonic; and locally as a gargle or wash.

Formula for a *Compound Infusion.*

MENTHA PIPERITA, *U. S.*

Peppermint.

The herb of *Mentha piperita.* A native of Europe; but common in the United States. Introduced.

Odor and taste of the plant.

Contains an oil. Oleum Menthæ Piperitæ, U. S.; *Oil of Peppermint.* Characteristics. Dose, gtt. ij to v.

Fresh leaves used as a cataplasm.

Used with a view to its stimulating and carminative properties in the form of infusion.

Tinctura Olei Menthæ Piperitæ; *Tincture of Oil of Peppermint; Essence of Peppermint.*—Mode of preparation. Strength. Dose, gtt. v—x—xv.

Aqua Menthæ Piperitæ, U. S.; *Peppermint Water.*—Mode of preparing. Uses as a vehicle, &c.

Trochisci Menthæ Piperitæ, U. S.; *Troches of Peppermint.* —Mode of preparing. Uses.

MENTHA VIRIDIS.

Spearmint.

The herb of *Mentha viridis.*

Characters. Employment.

Oleum Menthæ Viridis, U. S.; *Oil of Spearmint.* Dose, gtt. ij to v.

Tinctura Olei Menthæ Viridis; *Essence of Spearmint.*— Dose, gtt. x to xx.

Aqua Menthæ Viridis, U.S.; *Spearmint Water.*—Uses, as a carminative, &c.

Melissa, U.S.; *Balm.*—The herb of *Melissa officinalis.*

Origanum, U.S.; *Marjoram.*—The herb of *Origanum vulgare.* Oil used as an ingredient of Linimentum Saponis Camphoratum, U.S.

Hedeoma; *Pennyroyal.*—The herb of *Hedeoma pulegioides.*

GAULTHERIA, *U.S.*

Partridge Berry.

Leaves of *Gaultheria procumbens.* Native of the United States. Contains an oil. *Oleum gaultheriæ*, U.S.

Employed to flavor preparations.

MINERAL TONICS.

These differ in power, and in adaptation to the states of the system. They are employed under the utmost diversity of circumstances. They may be divided into those pertaining to the *Metals* and the *Mineral Acids.*

FERRUM, *U.S.*

Iron.

Other names *Chalybs* and *Mars;* hence *Ferruginous*, *Chalybeate*, and *Martial* preparations.

Forms of iron in nature.

In the metallic state, inert; must undergo change to render it serviceable as a medicine.

Resemblance of action between the preparations. The soluble most energetic.

Effects of continued small doses on health. Adapted to cases of debility, more especially, where there is an impoverished state of the blood. This is attendant upon anæmia.

Causes and symptoms of anæmia. Distinction between the

passive and active symptoms. Liability of the latter to be mistaken for acute disease. Remarks upon this important part of Therapeutics.

Connection between anæmia and deterioration in the constitution of the blood; change in the physical character of this fluid. Comparison between healthy and anæmic blood, and extent to which reduction of the elements takes place.

Indications to be fulfilled by the ferruginous preparations. Effects upon the organs and system generally, upon special organs.

State in which iron exists in the blood, connected with the principle, *hæmatin*. Mode of detecting it.

Proofs of absorption.

Therapeutic application of the preparations of iron. Diseases in which used; length of time that ferruginous preparations are to be continued. Caution in using them. They are numerous.

RAMENTA FERRI, *U. S.*

Iron Filings.

Prepared by filing iron, and separating the finer particles by a magnet through a sieve.

Properties.

Action from meeting with an acid in the stomach; reason for uncertainty and the disengagement of *gas*. Dose, grs. v to xx.

FERRI OXIDI SQUAMÆ; *Scales of Iron.*

Mode of obtaining them. Properties; composition; action of atmosphere. Preparation for medicinal use.

Similar in action to the filings. Dose, grs. v to xx.

FERRI PULVIS, *U. S.*

Powder of Iron.

Iron by Hydrogen.—Mode of preparing it. Sometimes called *Quevenne's Iron.* Rationale.

Appearance of the powder. Properties. Given in pill. Dose, gr. j to v.

FERRI OXIDUM HYDRATUM, *U. S.*

Hydrated Oxide of Iron.

Ferri Sesquioxydum Hydratum.

Mode of preparation. Rationale.

Properties; color. Form in the dried state; also in the moist. Composition.

Employed rather as an antidote to arsenic, although the medical effects are the same as those of the rust of iron or the Prepared Carbonate. When given for antidotal purposes, the quantity should be large.

Dose, grs. x to xx.

FERRI SUBCARBONAS, *U. S.*

Subcarbonate of Iron.

Precipitated Carbonate of Iron.

Mode of preparation. Rationale.

Appearance when first prepared; change in color from the action of the atmosphere. Rationale.

Taste; solubility.

Composition.

Character as a chalybeate, combined with bitter tonics and aromatics. Dose, grs. ij to v. Mode of administration, in pill, or with syrup. Changes it undergoes in the stomach.

The *Prepared Carbonate* or *Rust of Iron*, sometimes called *Rubigo ferri*, resembles the preceding. Mode of preparation. Rationale. Properties. Dose, grs. v to xx.

PILULÆ FERRI CARBONATIS, *U. S.*

Pills of Carbonate of Iron.

Mode of preparation; advantage of using syrup in the preparation.

Appearance; consistence; taste; solubility.

Advantages of this preparation.

Dose, grs. ij to x three times daily.

[illegible] precipitated by [illegible]

Ferric Sulphate - $3SO_4Fe_2$

made by adding to a solution of [illegible] sulphuric acid SO_4H_2, and [illegible] ammonia, [illegible] to the boiling point, and then [illegible] NO_3H until the solution [illegible] by such addition - [illegible] the ferric [illegible].

To make the [illegible] add a solution of the ferric [illegible]

$3SO_4 \quad Fe_2O_3$ or $3SO_4 \quad Fe_2$
NH_3

℞ Ferri sulphas
Magnes.
aq. fontis
Solve bene
Sylvii [illegible] m.

[illegible]

[illegible]

Remarks on the Carbonates and their existence in mineral springs.

FERRI SULPHAS, *U. S.*

Sulphate of Iron.

Green Vitriol.—Copperas.

Mode of preparing. Rationale.

Properties; form and color of crystals. Taste; solubility: effects of exposure to the atmosphere; effect of heat.

Composition.

Incompatibles.

Medical Properties.—Astringent and tonic. Effect in large doses. Cases to which adapted. Antidotes.

Dose in solution, gr. j to ~~x~~.

Importance of using the dried sulphate in pills. Dose, gr. ½ to ij. In doses of grs. xx, acts on the stomach.

From this is prepared the MISTURA FERRI COMPOSITA, U. S. Mode of preparation; ingredients; changes, and rationale. Dose, f ʒss.

TINCTURA FERRI CHLORIDI, *U. S.*

Tincture of Chloride of Iron.

Sometimes called *Muriated Tincture of Iron.*

Mode of preparation. Reactions which take place, and rationale.

Properties. Color; odor; taste. Effects of exposure.

Medical Properties.—Astringent, tonic, and diuretic. Effects in over-doses. Antidotes.

Cases to which it is adapted. Dose, gtt. v—x—xx.

FERRI ET POTASSÆ TARTRAS.

Tartrate of Iron and Potassa.

Mode of preparing. Rationale.

Form; color; taste; solubility. Composition.

Character as a chalybeate mild; advantages.

Dose, grs. x to xx.

It is the base of the *Vina Ferri;* Wines of Iron.

FERRI PHOSPHAS, *U.S.*

Phosphate of Iron.

Mode of preparation. Rationale.

Color of powder; taste. Composition. Effects of exposure. Insolubility.

Employment. Dose, grs. x to xx.

FERRI FERRO-CYANURETUM, *U. S.*

Ferrocyanuret of Iron.

Prussian Blue.

Mode of preparing. Rationale.

Form; color; insolubility; composition.

Medical Properties.—Tonic and sedative. Employment in nervous affections. Dose, grs. v to xx.

FERRUM AMMONIATUM, *U. S.*

Ammoniated Iron.

Mode of preparing. Rationale.

Form; color; odor; taste; solubility.

Composition.

Medical Properties.—Tonic, aperient, and alterative. Employment in nervous affections. Dose, grs. iv to x. In pill or solution.

FERRI IODIDUM, *U. S.*

Iodide of Iron.

Mode of preparing.

Form; color; odor; taste; solubility in water and alcohol. Attraction for moisture. Effects of exposure to the atmosphere.

Composition.

Incompatibles.

Medical Properties.—Cases to which adapted. Dose, gr. i to ij, in pill or solution. Effects in over-doses.

LIQUOR FERRI IODIDI, *U. S.*

Solution of Iodide of Iron.

Mode of preparing. Advantages of the syrup used in the preparation.

Dose, gtt. x to xx.

FERRI PERNITRAS, *U. S.*

Pernitrate of Iron.

Sesquinitrate of Iron, from which is made the LIQUOR FERRI NITRATIS, U. S.; *Solution of Nitrate of Iron.*—Mode of preparation.

Characters; odor; taste; composition.

Employment as an astringent and tonic. Dose, gtt. x to xx.

FERRI CITRAS, *U. S.*

Citrate of Iron.

Mode of preparing. Composition and properties.

Mild tonic. Dose, grs. iij to v, in pill or solution.

FERRI LACTAS, *U. S.*

Lactate of Iron.

Mode of preparing; composition; characteristics; solubility. Adapted to children. Dose, gr. i to v.

BISMUTHUM.

Bismuth.

The only preparation of this metal used in medicine is

BISMUTHI SUBNITRAS, *U. S.*

Subnitrate of Bismuth.

Formerly called *White Oxide*, and *Magistery of Bismuth.*

Mode of formation. Rationale.

Form; color; effect of exposure. Solubility in nitric acid.

Composition.

Medical Properties.—Astringent and tonic in small doses; in large, irritative. Employment in affections of the stomach. Effect on stools.

Dose, grs. iii to x, in pill.

Ointment of Subnitrate.

ARGENTUM, *U.S.*

Silver.

ARGENTI NITRAS.

Nitrate of Silver.

Mode of preparation. Rationale.

Character of the crystals; taste and solubility. Effect of heat upon them. Effect of exposure. Mode of keeping.

Composition.

Incompatibles. Tests.

When fused, constitutes *Argenti Nitras Fusus*, U.S.; *Lunar Caustic.*—Form and mode of preserving.

Adulterations.

Chemical relation to the organic animal principles.

Modes of entrance into the circulation. Proof of this.

Medicinal effects in small doses. Effects in large doses—in larger.

Therapeutic application. Difference in the quantity which can be administered dependent on the form. Amount which may be given in 24 hours, grs. v to vj. *Effect of discoloring the skin.* Dose, gr. $\frac{1}{6}$—$\frac{1}{4}$—i—ij, given in pill. Objection to solution. Antidotes. Used as an escharotic.

Argenti Oxidum, U.S.; *Oxide of Silver.*—Mode of preparation.

Appearance and sensible qualities. Composition.

Medical Properties.—As an astringent and alterative employed in affections of the stomach and intestines.

Dose, gr. $\frac{1}{2}$ to ij, in pill.

Acidum sulphuricum dil.
1 fluid to 13 –

Aromatic sulphuric acid

Syrup
Citric
Hydrochloric acid

ARGENTI CYANURETUM, U. S.; *Cyanuret of Silver.*—Officinal for the purpose of preparing *Hydrocyanic Acid.*

Mineral Acids.

ACIDUM SULPHURICUM, *U. S.*

Sulphuric Acid.

Oil of Vitriol of commerce. Obtained from the manufacturer.

Form; consistence; color; sp. gr. 1.845; odor; taste. Affinity for water. Source of impurity.

Incompatibles.

Effects on organic tissues in the concentrated state. Toxicological effects. Treatment.

In appropriate doses, tonic, refrigerant, and astringent. Employment in diseases. Objection to its prolonged use.

The preparations usually employed are

ACIDUM SULPHURICUM DILUTUM, U. S.; *Diluted Sulphuric Acid.*—Strength; preparation. Mode of administration. Dose, gtt. ~~x to xx.~~

ACIDUM SULPHURICUM AROMATICUM, U. S.; *Aromatic Sulphuric Acid; Elixir of Vitriol.*—Ingredients; color; odor; taste. An elegant preparation. Dose, gtt. ~~x to xx.~~

Local Application of *Sulphuric acid. Ointment.*

ACIDUM NITRICUM, *U. S.*

Nitric Acid.

Aqua Fortis.—Prepared by the manufacturer.

Distinction between the *Nitric* and *Nitrous Acids* of the shops, and explanation of what is meant by the *Acidum Nitrosum* of Edinburgh College.

Characters of *Nitric Acid.* Color; odor; taste; sp. gr. 1.42.

Incompatibles.

Effects upon the tissues of the concentrated acid. Diagnostic symptoms. Treatment.

Medical Properties.—In small doses, tonic and alterative. Effects on the organs; upon the gums; on the blood. Liability

to irritate the stomach. Cases in which useful. Dose, gtt. ij. to v. Mode of exhibition. "*Hope's Mixture.*"

Acidum Nitricum Dilutum, U. S.; *Diluted Nitric Acid.* Strength. Sp. gr. 1.07. Dose, gtt. x to xx.

Administration. Vessel to be used.

Topical employment. Amount of dilution.

Ointment. Uses.

Employment as a disinfectant.

ACIDUM MURIATICUM, *U. S.*

Muriatic Acid.

Hydrochloric Acid. Chlorohydric. Marine Acid.—Manufactured by the chemist.

Consistence; color; odor; taste; sp. gr. 1.16. Causes of impurity.

Incompatibles.

Medical Properties.—Tonic and stimulating. Employment in low forms of disease. Local application. Dose, gtt. v—x, in water or a bitter effusion.

ACIDUM NITRO-MURIATICUM, *U. S.*

Nitro-Muriatic Acid.

Mode of preparation. Rationale of reaction which occurs. called *Aqua Regia.*

Characteristics; odor; taste; corrosive properties; power of dissolving gold.

Medical Properties.—Tonic and alterative. Effect upon the liver; upon the skin. Diseases in which used with advantage. Dose, gtt. ij to v. Mode of administration.

External use by foot-bath; hip-bath or sponging; strength of solution, f℥j to ij to gallon of water.

Chlorinium, *Chlorine.*—Used internally in the form of *Liquor Chlorinii.* Employment in the form of gas in diseases of the pulmonary apparatus. Employment as a disinfectant. Mode of acting as a disinfectant.

common acid

no essential character, but

& traces of bromine

the oil with soda, decomposing the

which dissolves the oleate of lead,

OLEUM MORRHUÆ, *U. S.*

Cod-Liver Oil.

A fixed oil obtained from the liver of the *Gadus Morrhua*. Mode in which obtained. Varieties of the oil; causes of these varieties. Properties of these kinds; consistence; odor; taste. Test of the pure oil. Adulterations.

Contains the fatty principles; also iodine and bromine.

Medical Properties.—Effects upon the nutrition; upon the general functions; control over chronic diseases. Remarks on the mode of operating. Cases to which applicable. Liability to disorder the stomach. Dose, f℥ss to j two or three times daily. Mode of administration, and necessity of perseverance.

ARTERIAL STIMULANTS.

This class of medicines has also been termed Excitants, and Diffusible Stimulants. The term Arterial stimulants acquired from the more immediate and decided impression upon the heart and circulation. But these effects not confined to the bloodvessel system, as the nervous system is also impressed, and through it the various other organs.

The primary impression is upon the stomach, or tissue with which they are brought into immediate contact; this is communicated to the bloodvessels, and maintained by absorption.

They differ from tonics in acting rapidly and forcibly; in adding nothing to the blood; producing action merely, and not power. Their impression is consequently evanescent, and is followed by depression.

Most of the articles employed as stimulants have a tendency to act upon particular organs, which might authorize an arrangement under other classes. Those only are placed in this class which, from their general action, become useful in the management of diseases.

They are employed in cases of debility, with great depression of the vital powers, and where there is prostration and tendency to collapse. They are, however, not to be indiscriminately employed in consequence of the danger of inordinate reaction; where, therefore, there is a tendency to inflammation, they should be cautiously given. Cases illustrative of this.

They are used in hemorrhages; in debility during the progress or at the termination of acute disease; also to establish reaction at the onset of disease. The contra-indication always is the existence or proneness to inflammatory action.

separable which settles is added in

mining in solution. This is precipitate

Test of Purity.

A drop of SO_3 added

to fresh C. L. Oil on a porcelain plate, caus

the color immediately becomes a

NO_5

or rose-red color, which soon becomes

brown, while no such effect is pro-

duced on other animal or vegetable

oils. The most reliable tests are

Cyanide of Ammonium acts primarily on the brain & nervous system - increases the blood flow rapidly & forcibly - [illegible] - [illegible] effervesces upon the addition of Sulphuric acid - In small doses it acts as a nervous stimulant - often used as a stimulant [illegible] determination of blood to the skin - In excessive doses causes [illegible] - Beneficial in cases of deficiency in the sanguine system - Advantage to be derived from it in [illegible] - Cases of Phthisis when the patient is [illegible] with [illegible] and power to prolong life a short time - or in other words a [illegible] - In cases of poisoning by Hydrocyanic acid or other volatile poisons it may be successfully employed - It should be administered in [illegible] - [illegible] - [illegible] -

Symptoms which evince their injurious impression.

The existence of inflammation not always to be regarded as an obstacle to their administration, as it may even, under certain circumstances, be benefited by them. Cases illustrative of this.

AMMONIÆ CARBONAS, *U. S.*

Carbonate of Ammonia.

This salt is sometimes called *Sesquicarbonate of Ammonia.*

Mode of formation. Rationale.

When first obtained, sesquicarbonate; but by rectification, becomes a carbonate.

Form, fracture, color, and transparency of the mass; odor and taste; the effect of exposure and conversion into bicarbonate. Solubility; action of acids upon it.

Medical Properties.—In small doses, stimulant and calefacient; acting upon the general system, but local also in its impression; and prone, in too great a quantity, to irritate the stomach. The stimulating impression evanescent, and requiring renewal.

In large quantity, a powerful irritant, inducing inflammation.

The prolonged use productive of dissolution of the blood, or a liquefacient effect upon it, inducing cachexy.

Cases in which it may be beneficially employed; tendency to act upon the skin and lungs as well as on the nervous system; cases in which this is serviceable.

Employment as an antacid; also in poisoned wounds, and as an antidote. Advantageously combined.

Administration in pill or solution. Disadvantages of the pill; preferable in the latter form. Dose, grs. v to x. Mode of preparing carbonate of ammonia mixture.

Spiritus Ammoniæ Aromaticus, U. S.; *Aromatic Spirit of Ammonia.*—Ingredients. Mode of preparation.

Employment. Dose, f℥ss to ij, freely diluted in sweetened water.

Spiritus Ammoniæ, U. S.; *Spirit of Ammonia.*—Mode of preparation. Employment, the same.

OLEUM TEREBINTHINÆ, *U. S.*

Oil of Turpentine.

Spirits of Turpentine. Source and preparation.

Consistence; color; odor; taste; sp. gr.; volatility; inflammability. Solubility in water, alcohol, and ether.

Chemical composition, and effects of exposure.

Medical Properties.—General stimulating effects, with determination to lungs, and especially the kidneys. In large doses, it operates on the bowels. Detection in urine.

Inordinate impression. Action locally on skin.

Employment as a stimulant. Stages of fever and inflammation where it is serviceable; in hemorrhages.

Advantages of combination.

Dose, gtt. x to xx. Mode of administration.

By the rectum. Mode of preparing the *Oil of Turpentine Enema.* Uses as a revulsive.

CAPSICUM, *U. S.*

Cayenne Pepper.

The fruit of *Capsicum annuum* and other species. Inhabitants of hot climates; cultivated in this country.

Description of the plant.

Fruit; form; color; odor; taste; varieties.

Preparation of the powder, color, and effect of time upon it.

Contains *Capsicin*, extractive, and a pungent oil.

Relation to water and alcohol.

Medical Properties.—Both locally and generally stimulating, and applied to the skin acts as a rubefacient. Used to arouse the stomach, and to produce an alterative action in parts which are attacked with a low grade of inflammation.

Dose, grs. v to x, given in pill.

Infusum Capsici, U. S.; *Infusion of Capsicum.*—Strength of the infusion. Dose, f℥ss. When used as a gargle, generally made stronger.

Tinct. Cinnamomi
Tinct. Cinnamon. ℥ss
Comp. Tinct. Cinnamon ℥ iii
Acacia ℥ i
Sacchar ℥ ss
Aquæ ℥ iv
M. et S. Tablespoonful in [illegible]
ussary —

Turpentine

In scaled phial of [illegible]
essence from plate [illegible]
10 or 15 drops may be given [illegible]
daily —
[illegible] is slightly soluble in water,
more in alcohol, more still in [illegible]
[illegible] but deposits most of the oil on cooling. 100 parts
of oil of T. dissolve 10 parts of camphor in the
cold, and 20 parts when heated. [illegible]
T. [illegible] in [illegible]
[illegible]
[illegible]
[illegible]

Capsicum —

The plant is a native of the [illegible]
[illegible] of which [illegible]
[illegible]
[illegible]
[

Fragrant Lotion 1-27-[illegible]

Refrigerant Lotion

℞ Cetacei ʒ ij

Alcohol ʒ ij

Aq: flor: aurant: subacetatis ʒ ss

Aquæ ℥ viii.

M. S. [illegible]

[illegible] for pharmaceutical purposes is obtained by distilling [illegible]

℞ [illegible]

[illegible]

[illegible] of liquors is from a volatile or [illegible]

[illegible]

[illegible]

[

TINCTURA CAPSICI, U.S.; *Tincture of Capsicum.*—An alcoholic solution. Dose, f℥i to ij.

External employment.

ALCOHOL, *U. S.*

Alcohol.

Spirit of Wine.—Origin of the term alcohol.

Mode of production by *vinous fermentation* from grape sugar. Rationale. Other sources.

Division of spirituous liquors into fermented and distilled.

FERMENTED. Wines, cider, malt liquors, &c.

DISTILLED. Brandy, whiskey, rum, gin, arrack, &c.

Source of flavor.

Mode of obtaining alcohol. *Proof spirit. Absolute alcohol.*

Properties of officinal alcohol. Color; odor; taste; volatility and inflammability; sp. gr. .835

Substances for which alcohol is the best solvent. Pharmaceutical employment.

ALCOHOL DILUTUM, U. S.; *Diluted Alcohol.*—Strength; application.

Medical Properties.—External use as a refrigerant, and as a stimulant. Combinations.

Internal employment as a stimulant. Effects on the circulation and nervous system. Poisonous impression. Effects of prolonged use. Proofs of absorption.

In disease, a most valuable aid to our therapeutic means, and may be employed in cases attended with sinking and prostration; with great success in low forms of fever, and in analogous stages of other affections.

Brandy is usually given in toddy or milk punch; but other liquors may be substituted.

Varieties of Wine.—Relative strength, and advantages of one over another in certain cases. Given in the form of *Wine whey. Spiced Wines.*

Malt liquors; their peculiarities.

PHOSPHORUS.

Source from which obtained. from bone-phosphate

Characters; effect of light and heat. Mode of keeping it. Solubility in ether and oils.

A powerful stimulant; action quick, but not durable. Acting on secretions and on the genital organs. In too great a quantity, corrosively poisonous. Treatment. Little used on account of the violence of its operation; but at one time employed.

Given in ethereal solution, made into an emulsion. Dose gr. $\frac{1}{16}$, $\frac{1}{12}$, $\frac{1}{8}$.

Used with oil as a rubefacient and cauterant.

Malt liquors are to be preferred to stimulants in cases of lassitude & they stimulate the secretion of Urine. Porter contains an astringent. If Examinbe added to thin a very nice jelly may be made. Thin wine has really more acid than Verdicio but is less apt by water. Malt liquors of moderate quality of bring to boiling heat & keep on.

Phosphorus.

Obtained from Phosphate of Lime (bone phosphate) by being digested 24 hours with two thirds their wt. of strong Sulphuric acid, previously diluted with twelve times its weight of water. The SO_3 separates a part of the lime from the Phosphoric Acid & precipitates it as a Sulphate of Lime, while a super phosphate remains in solution. This mixture is then strained through a linen cloth to separate the sulphate of Lime & afterwards submitted to evaporation which causes a fresh precipitation of the Sulphate, requiring to be separated by a new filtration. The filtered solution of super-phosphate is evaporated to a syrupy consistence, & then thoroughly mixed with half its weight of powdered charcoal so as to form a soft mass, which is dried by being heated to dull redness in an iron pot. The mass when cool is quickly transferred to a coated earthenware retort,

NERVOUS STIMULANTS.

These may be defined to be substances capable of exerting a decided stimulating impression upon the nervous system and its central organs, the brain, spinal marrow, and perhaps the ganglia.

The circulatory system, however, is secondarily influenced by them. The union between the nervous and circulatory systems is so close, that it is difficult to understand that an impression can be made upon one without involving the other. Yet in pathological conditions the preponderance of nervous impression is most marked.

The term *Antispasmodics* has been employed to designate this class. Objection to the term, founded both on the peculiar conditions not spasmodic, which articles belonging to this class are capable of removing, and on the diversity of measures employed to allay spasm.

Nervous stimulants are most efficacious in pure nervous derangement without organic lesion. In studying their effects, we must first investigate the peculiarities of nervous action; and it will be found that, in individuals prone to derangements of this kind, there exists excessive *mobility* of the nervous system. Explanation of what is meant by this term. Symptoms of perverted nervous action. Origin of what are called "Vapors" and "Spasms" in the nervous centres; and their manifestation by reflex action explained. Views of the older pathologists on this subject.

Illustrations from affections belonging to the class called *nervous*, and especially hysteria. Connection between these affections and debility. Power of increasing and equally diffusing nervous power possessed by nervous stimulants. Modus operandi predicated upon this.

Employment in affections having nervous complications, the only contra-indication being high excitement; but where excitement is simulative, most efficacious.

Idea entertained of the connection between antispasmodics and odoriferous properties.

Proof of their absorption, in addition to an impression by nervous agency.

MOSCHUS, *U. S.*

Musk.

A peculiar concrete substance, derived from the *Moschus moschiferus*. The animal is a native of northern China and Tartary, and is also found in the Himalaya Mountains.

Character and habits of the animal.

Musk Pod.—Where situated. Form; covering; size; structure; amount of musk contained.

Musk.—Consistence; color; feel; odor; taste; varieties.

Adulteration. Means of determining genuineness.

Relation to water, alcohol, and ether.

Constituents. Necessity of preservation in dry vessels.

Medical Properties.—Stimulates the nervous system, but with little effect upon the circulation. In large doses, affects the head. Impregnation of the secretions. Diseases in which used with advantage. Given in pill or emulsion. Dose, grs. i to v. ℞ ℥

Tinctura Moschi; *Tincture of Musk.*—Not officinal. Dose, gtt. xxx.

CASTOREUM, *U. S.*

Castor.

A peculiar concrete substance, obtained from the *Castor fiber*, or *Beaver*. Peculiar to the northern portions of Europe, Asia, and America.

Position of the pods; shape and appearance; structure; color; consistence; odor and taste of castor.

Two varieties, American and Russian. Difference between them.

Constituents. Volatile fatty matter, resinous matter, *Castorin*.

Moschus

The musk is contained in an oval, hairy, projecting sac, found only in the male, situated between the umbilicus and the prepuce from two to three inches long—

In the vigorous, adult, male animal the sac contains six drachms of musk; but in the old seldom more than two drachms & none in the young. The musk deer frequents the snowy recesses & most inaccessible crags of the mountains. Musk is in grains or lumps cemented together soft & unctuous to the touch & of a reddish brown or ferruginous color, resembling that of dried blood — The portion soluble in alcohol varies from 25 to 62 per ct. Ether is a good solvent. The principal adulteration is dried blood, together with sand, lead, iron filings, hair animal membrane, tobacco, the dung of birds, wax, benzoin, storax, asphaltum, & other substances are introduced —

Medical Properties.—Decidedly a nervous stimulant. Employment in spasmodic and nervous affections. Dose, grs. x to xx in pill.

Tinctura Castorei, U. S.; *Tincture of Castor.*—Dose, gtt. xxx.

VALERIANA, *U. S.*

Valerian.

The root of the *Valeriana officinalis.* A native of Europe. Cultivated in England and introduced into the gardens of this country.

Time of collecting the root. Modifications from soil. Care in drying it.

Properties; form and appearance; color; odor; taste.

Powder.

Constituents, volatile oil, resin, and an acid, *Valerianic.*

Oleum Valerianæ, U. S.—Mode of preparing.

Medical Properties.—One of the most valuable of the class. A decided stimulant. Effect on the head in large doses. In small doses, also tonic.

Employment. Dose of powder, ℈j to ʒss, repeated.

Infusum Valerianæ, U. S.; *Infusion of Valerian.*—Dose, ʒss to ij.

Tinctura Valerianæ, U. S.; *Tincture of Valerian.*—Advantages. Dose, fʒi.

Tinctura Valerianæ Ammoniata, U. S.; *Ammoniated Tincture of Valerian.*—Made with *Aromatic Spirit of Ammonia.* Antacid and stimulating. Dose, fʒss, properly diluted.

Extractum Valerianæ Fluidum, U. S.; *Fluid Extract of Valerian.*—Mode of preparing. The most valuable preparation. Dose, gtt. x to xxx.

Remarks on valerianates. *Valerianate of Zinc, Valerianate of Quinia.*

ASSAFŒTIDA, *U. S.*

Assafetida.

The concrete juice of the root of the *Narthex Assafœtida*, a native of Persia.

Description of the plant. One of the *Umbelliferæ.*

Mode of collecting the juice from the root. Consistence when fresh.

Characters; in *tears;* form; color externally and internally; in *masses;* consistence; appearance; fractured surface; change from exposure to the atmosphere; odor; taste. Powder.

Constituents, gum, resin, and oil.

Relation to water and alcohol.

Adulterations.

Medical Properties.—A strong stimulant to both the nervous and sanguiferous systems. Effect on stomach, lungs, and bowels.

Proofs of absorption.

Employment in nervous disorders; in pulmonary affections; in stomachic diseases.

Adapted to cases of children and old persons.

Dose, grs. v to x, in pill.

Mistura Assafœtidæ; *Assafetida Mixture. Lac Assafœtidæ.* Dose, f℥ss.

Tinctura Assafœtidæ; *Tincture of Assafetida.*—Change when mixed with water. Dose, gtt. xx to lx.

Combinations.—*Pills of Assafetida and Aloes.* &c.

SUCCINUM, *U. S.*

Amber.

Source whence procured; locality.

Form; color; translucency; effect of heat.

By destructive distillation there are obtained from it an oil, and an acid, *Succinic.*

Oleum Succini, U. S.; *Oil of Amber.*—Mode of preparation. When redistilled, it constitutes the

Oleum Succini Rectificatum, U. S.; *Rectified Oil of Amber.*

Appearance when first obtained. Color of the purified; consistence; odor; taste. Effect of age.

Dracontium -

Contains volatile oil - more used as a domestic remedy - than general use.

[illegible] -

an stimulating reputable [illegible] sustaining the nerves than in nursing mothers -

The act - principle of the [illegible] may closely allied -

Medical Properties.—A decided stimulant, and in over-doses affecting the head. Also acts on kidneys.

Employment. Dose, gtt. v to xx, in emulsion.

External application.

DRACONTIUM, *U. S.*

Skunk Cabbage.

The root of the *Dracontium fœtidum;* also called *Ictodes fœtidus*, and *Symplocarpus fœtidus.* A native of this country.

Form of the dried root. Color; fracture; odor; taste. An acrid principle resides in it, which is dissipated by heat and removed by decoction.

Medical Properties.—Stimulating, antispasmodic, and narcotic. Effects in large doses. Its derives its reputation from its use in asthma. Dose in powder, grs. x to xx.

THEA; *Tea.*—The leaves of *Thea Bohea* and *T. viridis.* It contains a peculiar principle called *Thein.*

COFFEA; *Coffee.*—The seeds of the *Coffea arabica.* They contain *caffein.*

Remarks on the use of TEA *and* COFFEE.

CEREBRAL STIMULANTS.

THESE are substances which, with a general impression upon the nervous system, have a more special direction to the brain, which they decidedly affect. Although the primary effect is stimulating, it is soon followed by depression and subsidence of the vital actions, so as to give rise to the idea that they are sedatives. Sleep is the most prominent effect induced by them; hence they have been termed *Narcotics*, *Soporifics*, *Hypnotics*, and *Stupefacients;* and, as they relieve pain, they have also been called *Anodynes*.

From their action, three stages are observable: 1st. That of stimulation. 2d. That of narcotism or sleep. 3d. That of depression. These stages depend, for intensity and duration, upon the quantity administered. Illustrations of this.

All the organic and animal movements and functions evince the power of their impression. In the first instance, both series are invigorated; in the second, the organic are depressed and the animal suspended; and in the last, there is depression of all.

In employing narcotics, it is important to understand the cause of prostration, and not confound it with that induced by disease.

The difference in the several stages has been attributed to the difference in the mode of operation; thus, the stimulation has been regarded as owing to nervous action, while the narcotism and depression have been thought to be due to the after absorption. It is more probable that each is due to the absorption, but in a lesser or greater degree.

There is a disparity of power evinced by the several articles included under this head. Illustration of this. And there is great diversity in the modes of affecting particular organs. Illustration.

This has been attributed to an elective operation, not only referable to different organs, but to different parts of the same organ.

In selecting the article to be used, this circumstance is of importance, from the application which can be made to particular cases, and in fulfilling various indications.

In large doses, all of them are poisonous. Death occurs from the suspension of the powers of the brain, and the nerves which originate from it; asphyxia is a consequence. Explanation of the relation between the brain, pulmonary apparatus, and the heart—the tripod on which life stands; and of the effect upon the blood and its secondary consequences. Best mode of obviating this.

Narcotics are operative when applied to any part by which they can be absorbed.

There is a great difference in the constitutional susceptibility to their impression, for, while some persons are affected violently and disagreeably, others are kindly affected by them.

Nor is there any class in which a tolerance to their impression is more decided; this is due to the accommodation of the powers of life to their use, and partly to disease. A point may ultimately be reached where this susceptibility is lost, and then natural depression follows. The tolerance of large quantities is due to the non-corrosive action upon the tissues, but still they must be regarded as irritative. Difficulty of suspending the habitual use of them; reason.

Importance, when their use has to be continued, of substituting one for another, and changing the surface to which applied.

Narcotics are employed medicinally, either for their stimulating or sedative effects. Cases where the first are advantageous. Mode in which they are antispasmodic. Cases in which they are important as sedatives, with relief of pain. Evil effects of pain, and the necessity of removing it.

Necessity of removing plethora, and especially determination to the brain, before their use.

OPIUM.

The concrete juice of the unripe capsules of the *Papaver somniferum* or *Poppy*. This plant typifies the *Papaveraceæ*. Va-

rieties of the poppy; *White* and *Black*. Description of the plants, and characters by which they are distinguished. These are cultivated in Asia, but have been transferred to Europe and this country.

Form and size of the capsules. Structure and internal arrangement. Appearance and color of the seeds.

Constituents of the capsules, and mode of employment.

The seeds innocuous, nutritious, and contain a fixed oil.

Poppy oil. Uses in pharmacy and the arts.

Modes of obtaining opium, and the difference of quality depending upon the operation. Adulteration and factitious preparations.

General characters of opium; form; color externally and internally; coverings; weight of masses; consistence in the fresh and dry state; appearance of a cut surface; inflammability; odor; taste; mode of powdering.

Detection of adulterations. Solubility in water and alcohol; ether and vinegar.

Commercial History.—Varieties of opium. These are: 1. *Turkey Opium*, including Smyrna and Constantinople.

Smyrna Opium.—Size of masses; shape; color, and coverings; smell. Relative value, and reason for the preference given to it.

Constantinople Opium.—Form and size of the masses; color; covering; odor.

2. *Egyptian Opium.*—Form; appearance; relative value.

3. *India Opium.*—Distinguished as *Patna*, *Benares*, and *Malwa*. Source; appearance and distinctive properties of these varieties; rarely met with in this country, but sent to China.

Constituents. *Morphia*, *Narcotina*, *Codeia*, *Narceia*, and *Meconic acid* are the most important; but numerous other principles exist in it, and render its composition elaborate. Sketch of its chemical history.

Morphia, U. S.—State in which it exists in opium. Mode of obtaining it.

Form and appearance of the crystals; color; taste. Solubility in water, in alcohol; in alkaline solutions, in acids. Insolubility in ether. Effect of heat. Nature and composition. Tests.

Narcotina.—Mode of obtaining it, founded on solubility in ether. Form and appearance of the crystals. Taste. Solubility in water and alcohol. Effects of acids. Mode of distinguishing it from morphia.

Codeia.—Characteristics. Nature, and combinations.

Other principles.

Reagents with solutions of opium. Test proposed by Dr. Hare.

Medical Properties.—In whatever way employed, opium makes a decided impression on the nervous centres, and its effects are to be referred to them. Evidences of the disturbance of the organic and animal functions and movements. Symptoms of its stimulative action in small doses, and of its sedative in larger, and of its final depressing effect. Relation of these to each other. Remarks on the anomalous action on the secretions. Effect on skin. Proofs of absorption. Poisonous impression. Symptoms and diagnosis. Post-mortem appearances. Treatment. Peculiarities in the constitution of individuals relative to opium. Age and habit. Disease, &c. Therapeutic indications, and employment. Diseases in which it fulfils these indications. Contraindications.

Administration. Dose. gr. j, in pill or powder, by itself or in combination. The preparations are numerous.

Pilulæ Opii, U. S.; *Opium Pills.* Mode of preparing.

Tinctura Opii, U. S.; *Tincture of Opium. Laudanum.*

Mode of preparation. Strength about 37½ grs. to fluidounce. Dose, ♏xiij, or gtt. xxv. Caution with regard to sediment.

Tinctura Opii Acetata, U. S.; *Acetated Tincture of Opium.*—Mode of preparing. Chemical character. Strength 48 grs. to a fluidounce. Dose, ♏x or gtt. xv—xx.

Tinctura Opii Camphorata, U. S.; *Camphorated Tincture of Opium. Paregoric Elixir.*—Mode of preparation and ingredients. Contains 2 grs. of opium to fluidounce. Dose, f℥j to f℥ss. Less for children; 18 drops equal to one of laudanum.

Vinum Opii, U. S.; *Wine of Opium; Sydenham's Laudanum.*—Constituents and preparation. Dose, ♏x, or gtt. xx. Contains 60 grs. of opium to f℥j.

Acetum Opii, U. S.; *Vinegar of Opium.* Black Drop.—In-

gredients and mode of preparation. Contains nearly 74 grs. opium to fluidounce. Dose, ♏x.

Confectio Opii, U. S.; *Confection of Opium; Theriaca.*—Ingredients and preparation. Strength, 1 gr. opium to 35 grs.

Extractum Opii, U. S.; *Extract of Opium.*—Advantages for some purposes over opium. Twice as strong.

Salts of Morphia.

Morphiæ Sulphas, U. S.; *Sulphate of Morphia.*—Mode of preparation. Appearance and form of the crystals. Solubility in water and alcohol. Taste. Adulterations and tests. Dose, gr. $\frac{1}{6}$ to $\frac{1}{4}$.

Liquor Morphiæ Sulphatis, U. S.; *Solution of Sulphate of Morphia.*—Made in the proportion of gr. j to the fluidounce. Dose, f℥j to ij.

Morphiæ Murias, U. S.; *Muriate of Morphia.*—Mode of preparation. Characteristics. Dose, gr. $\frac{1}{6}$ to $\frac{1}{4}$.

Morphiæ Acetas, U. S.—Mode of preparing, and characteristics. Dose, gr. $\frac{1}{6}$ to $\frac{1}{4}$.

Remarks on the external application of the salts of morphia.

LACTUCARIUM, *U. S.*

The inspissated juice of the *Lactuca sativa; Garden lettuce.*—Cultivated in Europe and this country.

Description of plant. Mode of collection.

Properties; appearance; consistence; odor; taste; relation to water.

Constituents.

Peculiarities as an anodyne. Employment. Dose, grs. ij to iij.

Remarks on the Solaneæ.

HYOSCYAMI FOLIA, *U. S.*

Henbane Leaves.

The leaves of *Hyoscyamus Niger.*

Hepatitis and its treatment
[illegible]
In Liver cirrhosis — Infectious
Rheumatism

1/2 grain [illegible]

Rheumatism [illegible]
[illegible]
℞ Extract [illegible] grs. i
Pil. hydrarg. grs. i
Ext. [illegible] Comp. grs. iv
M. ft. [illegible]
S. 1 or 2 at a dose

HYOSCYAMI SEMEN, *U. S.*

Henbane Seed.

The seeds of *Hyoscyamus Niger.*

Description of the plant; a native of Europe, but has been cultivated in this country. Grows wild in England. Variety, *H. albus.*

Time at which the *leaves* are plucked.

Appearance; color; odor; taste.

Causes of irregularity in the activity of the leaves.

Form, color, and size of *seeds.* Taste.

Relation to water and alcohol.

Constituent, a peculiar alkaloid principle, *Hyosciamia.* Form; color; taste; solubility.

Medical Properties.—Character as a narcotic; difference between it and opium. Effect in large, and in inordinate doses. Employment therapeutically. Administration.

Extractum Hyoscyami, U. S.; *Extract of Henbane.*—Mode of preparing from the fresh leaves. Characters of the preparation. Dose, gr. ½ to iij. Advantages of combination.

Extractum Hyoscyami Alcoholicum, U. S.; *Alcoholic Extract of henbane.*—Reason for its introduction. Mode of preparation. Dose, gr. j to ij.

Tinctura Hyoscyami, U. S.; *Tincture of Henbane.*—Dose, gtt. xx to f℥j.

BELLADONNA, *U. S.*

Belladonna.

The leaves of *Atropa belladonna. Deadly nightshade.*

Description of the plant. An inhabitant of Europe, but introduced into the gardens of this country.

All parts of this plant are highly energetic, but the leaves alone have been recognized as officinal.

Properties of the dried leaves; color; appearance; odor; taste. Powder.

They contain a peculiar principle, *Atropia.* Chemical character of this principle; solubility in water and alcohol; reac-

tion with acids, forming salts. Odor, unpleasant when impure. A most energetic poison.

Medical Properties.—Those of a potent narcotic, having a decided effect in dilating the pupil.

Effect on throat and skin. Poisonous action. Employment in disease.

Administration of powder. Made into pill. Dose, gr. j.

EXTRACTUM BELLADONNÆ, U. S.; *Extract of Belladonna.*—Mode of preparing from fresh leaves. Consistence; color; odor; taste. Dose, gr. ¼ to gr. j.

If increased, it should be done cautiously.

Reason for commencing with a small dose.

EXTRACTUM BELLADONNÆ ALCOHOLICUM, U. S.; *Alcoholic Extract of Belladonna.*—Reason for its introduction. Characters. Dose, the same.

TINCTURA BELLADONNÆ, U. S.; *Tincture of Belladonna.*—Dose, gtt. v to x.

UNGUENTUM BELLADONNÆ, U. S.; *Ointment of Belladonna.*—Mode of preparing. Employment as a local agent.

EMPLASTRUM BELLADONNÆ, U. S.; *Belladonna Plaster.*—Mode of preparing; form; employment.

External employment of *Atropia.*

STRAMONII FOLIA, *U. S.*

Stramonium Leaves.

The leaves of the *Datura Stramonium.*

STRAMONII RADIX, *U. S.*

Stramonium Root.

The root of *Datura Stramonium.*

Description of the plant. An inhabitant of this country and of Europe. It is here called *Jamestown Weed.* Two varieties. All parts of the plant are energetic.

Time when the *leaves* should be gathered; odor; taste.

The *seeds* are ripe in the autumn. Form; size; color; taste.

Relation of both to water and alcohol.

Contain a peculiar principle, *Daturia.*

Medical Properties.—Resembles hyoscyamus. Therapeutic

application. Poisonous effects. Mistake made with the young plants.

Administration. The powdered seeds are sometimes employed. Dose, gr. j.

EXTRACTUM STRAMONII FOLIORUM, U. S.; *Extract of Stramonium Leaves.*—Mode of preparing. Color and odor. Dose, gr. j to iij.

EXTRACTUM STRAMONII SEMINIS; *Extract of Stramonium Seeds.*—An alcoholic extract. Dose, gr. ¼ to j.

TINCTURA STRAMONII, U.S.; *Tincture of Stramonium.*—Made from the seeds. Dose, gtt. x to xx.

UNGUENTUM STRAMONII, U.S.—Mode of preparing it. Uses.

DULCAMARA, *U. S.*

Bittersweet.

The stalks of *Solanum Dulcamara*, sometimes called *Woody Nightshade.* An inhabitant of this country and of Europe.

Description of the plant. All parts of it are energetic. Berries poisonous.

Stalks, time when gathered. Form; appearance; color; structure; odor; taste.

Contain a principle called *Solania.* Characters.

Relation to water and alcohol.

Medical Properties.—Narcotic and alterative. Action on secretions. Effects of over-doses.

DECOCTUM DULCAMARÆ, U. S.; *Decoction of Bittersweet.*—Mode of preparation. Dose, f℥ij, three or four times daily.

EXTRACTUM DULCAMARÆ, U. S.; *Extract of Bittersweet.*—Mode of preparing. Dose, grs. v to x.

An alcoholic extract would be stronger.

Remarks on LOGANIACEÆ.

HUMULUS, *U. S.*

Hops.

The strobiles of *Humulus Lupulus.* A European and American plant.

Description.

Strobiles; dried; form; color; odor; taste. Relation to water and alcohol.

Contain a bitter principle; volatile oil, and

Lupulina, U. S., *Lupulin*—which is the powder attached to the strobiles. Mode of collecting it; appearance; color; cohesion; odor; taste; inflammability. Solubility in alcohol.

Medical Properties.—Possesses properties of a bitter, but no stimulative power. A mild anodyne. Cases to which adapted.

Hop pillow.

Hop fomentation.

Infusum Humuli, U.S.; *Infusion of Hops.—Hop tea.* Mode of preparation. Dose, f℥j to ij or more.

Decoction objectionable.

Tinctura Humuli, U. S.; *Tincture of Hops.*—Dose, f℥j to f℥ss.

Lupulin is given in pill. Dose, grs. vj to xij. Use.

Tinctura Lupulinæ, U.S.; *Tincture of Lupulin.*—Mode of preparing. Dose, f℥ss to j.

EXTRACTUM CANNABIS, *U. S.*

Extract of Hemp.

An alcoholic extract of the dried tops of *Cannabis sativa*, variety *Indica.* It is an inhabitant of Persia, Caucasus, and the hills of the north of India. Resemblance to common hemp.

The dried hemp plant is called *Gunjah*, and the concreted resinous exudation from the leaves, stalks, &c., is called *Churrus.*

In the plant there are a volatile oil, and a peculiar active principle, *Cannabin.*

Characters of *Cannabin;* relation to alcohol and ether.

Mode of obtaining the extract.

Medical Properties.—Power of exhilaration; effects upon sensation and motion; control over pain; danger of using it in too large doses. Dose, gr. j to v.

CAMPHORA, *U. S.*

Camphor.

A peculiar concrete substance, derived from *Camphora officinarum*, and purified by sublimation.

Hops – There are two kinds of malt liquor –

In case of [illegible] –

Price of –

Porter 3/

Ale 2/

As a beverage [illegible]

Its Properties

[illegible]

[illegible]

Hops [illegible] Porter 3/

Boiling water 2/

Ext. [illegible]

[illegible]

If [illegible]

[illegible]

[illegible]

(Cleanses insanity in two days or less)

Cundur - Blood 2 to 3 oz 1 hyl
(Cundurango bark is sometimes
called Condor)

there is a low fever & delirium

Colic &c - Influenza

Epithelioma - gonorrhoea -

Rectal worms -

Description of the plant. Belongs to *Laurineæ*. The whole of it contains *Camphor*. It is a native of the mountainous districts of China and of Japan, and other eastern islands.

Mode of procuring the camphor.

Crude Camphor.—Form; color; odor; taste.

A variety is the Japan, which has a pink hue.

Mode of refining camphor. Form which it assumes; appearance of the masses; fracture; crystalline structure; feel; odor; taste; solubility in water; in alcohol and oils; volatility.

Mode of powdering.

Composition. True chemical nature. *Oxide of Camphene.*

Another variety of *Camphor*, *Borneo* or *Sumatra*, from the *Dryobalanops Camphora*.

Form and characteristics. Difference between it and the officinal. Value.

Oil of Camphor.—Consistence; color; odor; taste.

Composition. Commercial source.

Medical Properties.—A local irritant, but a sedative to the circulation, while it rouses nervous action and determines to the skin. Reaction follows the decided depressing effects. Action in over-doses.

Proofs of absorption. Cases in which used. Action on urinary organs.

Administration in powder or pill. Dose, grs. v to x. In emulsion.

Aqua Camphoræ, U.S.; *Camphor Water.*—Mode of preparing. Strength. Dose, f℥ss to j.

Tinctura Camphoræ, U.S.; *Tincture of Camphor.*—Strength. Uses. Dose, f℥ss to j.

The external application of camphor. Liniments of camphor.

Tinctura Saponis Camphorata, U.S.; *Camphorated Tincture of Soap.*

Linimentum Saponis Camphoratum, U.S.; *Camphorated Soap Liniment.*—Reason of the difference of consistence in the two. Uses.

CONII FOLIA, *U.S.*

Hemlock Leaves.

The leaves of the *Conium maculatum.*

CONII SEMEN, *U.S.*

Hemlock Seed.

The fruit of the *Conium maculatum.*

Description of the plant. Belongs to the *Umbelliferæ.* A native of Europe, but has been introduced and cultivated in this country.

Effects of temperature and climate upon it.

Time at which the leaves should be gathered. Mode of preservation. All parts are endowed with activity, odor, and taste in the fresh state.

Color and appearance of the dried leaves, and of the powder. Odor; taste.

Relation to water and alcohol.

There exists in the plant a peculiar principle, *Conia*, and an odoriferous oil.

Characters of *Conia.* Odor; taste; nature; test. Solubility in water, in alcohol, and in ether. Effects upon the system.

Distinction between this plant and *Cicuta.*

Medical Properties.—Knowledge possessed of it by the ancients, and the uses made of it. In the primary impression, stimulating. In the secondary, sedative; possessing extreme power over the brain and nervous system in large doses. Poisonous effects. Therapeutical employment.

Administration. Dose of powder, gr. j to v.

EXTRACTUM CONII, U.S.; *Extract of Hemlock.*—Mode of preparing from the fresh leaves. Appearance; color; odor; taste. Dose, gr. j to iij. Caution with respect to different parcels from variation of strength. Causes of inequality. Combinations.

EXTRACTUM CONII ALCOHOLICUM, U.S.; *Alcoholic Extract of Hemlock.*—Reason for its introduction.

TINCTURA CONII, U. S.; *Tincture of Hemlock.*—Strength. Uses. Dose, gtt. xx to xxx.

External employment of *Hemlock.*

1872

Effects of Alcohol

Beneficial

Injurious

It is used as a stimulant by

In 1847 by Prof. Simpson in Edinburgh

Unnecessary in health

Many is employed in cases of pneumonia as an anaesthetic

Alcohol

influence by

ÆTHER, *U. S.*

Ether.

Formerly *Æther sulphuricus.*

Mode of preparation and purifying. Rationale.

Chemical nature, an *Oxide of Ethal.*

Properties. A colorless, limpid liquid. Odor; taste; sp. gr. 0.750; volatility; inflammability; change from age; solubility in water; in alcohol.

Effect when applied to the skin.

Medical Properties. Effects of swallowing it undiluted. Action upon the brain, upon the system generally. Rapid absorption and elimination. Tolerance to its impression.

Employment under circumstances of debility, and in nervous affections.

Mode of administration. Dose, f℥ss to ℥j, properly diluted. Mode of thoroughly incorporating it with water.

External use.

Employment as an *Anæsthetic agent.*

SPIRITUS ÆTHERIS COMPOSITUS, *U. S.*

Compound Spirit of Ether.

Hoffmann's Anodyne.—Mode of preparing. Constituents.

Characters; odor; taste; test for its genuineness.

Employment as a composing anodyne. Cases in which useful. Dose, f℥ss to j, mixed with water.

CHLOROFORMUM, *U. S.*

Chloroform.

Mode of preparation. Composition.

Properties; consistence; color; odor; taste. Sp. gr. 1.49. Size of drop. Solubility in water and alcohol.

Employment as an anodyne; as an anæsthetic agent. Danger from its use. Mode of producing death. Dose, gtt. x to xxx.

External employment.

Chloral Hydr

EXCITO-MOTOR STIMULANTS.

By the expression which is used to designate this class, it is meant that, with other effects, they are capable of so impressing the spinal centre as to rouse into action the motor nerves. Sometimes this is effected with so much intensity as to produce inordinate muscular spasmodic action, amounting to convulsions. They are used either to arouse muscular structure into action, to accomplish a particular purpose, or to gently bring about lost motor power in muscles. In some of them, there is a decided narcotic action; those here introduced are remarkable for their impression on the nervous centres.

NUX VOMICA, *U. S.*

Nux Vomica.

The seeds of the *Strychnos Nux Vomica*. An inhabitant of India—the Coromandel Coast, and Ceylon.

Description of the plant.

Properties of the seeds; size; form; color; structure; density; odor taste. Difficulty of powdering. Relation to water and alcohol.

Contains *Strychnia* and *Brucia*, and an acid, *Igasuric*.

Properties of strychnia; of brucia. Tests. Solubility. Chemical reaction. Salts.

Medical Properties. Effects in small doses. Action upon the nervous system. Symptoms of inordinate impression. Poisonous action. Proofs of absorption.

Employment in paralysis; as a tonic.

Mode of exhibition in powder. Dose, grs. ~~ij~~ to ~~iij~~, in pills, repeated two or three times daily.

Extractum Nucis Vomicæ, U S.; *Extract of Nux Vomica.*—

Nux Vomica

Strychnine - Antidote -

Bucia -

Test for Strychnine -

Test for

Quantity

Gives

Strychnine

If

There has been no antidote -

Tannic Acid may be given with

best Antidote

by the stom

Neutralize in

Tannic

Dose -

An alcoholic extract. Mode of preparation. Characters. Dose, gr. ½ to ij, in pill.

Tinctura Nucis Vomicæ, U. S.; *Tincture of Nux Vomica.*—Mode of preparing. Dose, gtt. x to xx.

Employment of *strychnia.* Dose, gr. $\frac{1}{10}$ to $\frac{1}{16}$, first dissolved in alcohol, and added to conserve of roses to form pill. Endermic application. Quantity used, gr. ½. Salts of strychnia; *Acetate, Nitrate,* &c. Uses.

Ignatia Amara; *St. Ignatius' Bean.*—Found in the Philippine Islands. *Seeds* of the fruit employed.

Properties of the seeds.

Contain brucia and strychnia.

Employment.

Remarks on the *Strychneæ.*

ERGOTA, *U. S.*

Ergot.

Secale cornutum; Spurred Rye.—The diseased seeds of *Secale cereale.*

Produced by the conversion of the grain into a fungus, which has been called, by De Candolle, *Sclerotium clavus;* by Mr. Quecket, it is regarded as diseased from the presence of a fungus, *Ergotætia abortifaciens.*

Difference of opinion among naturalists.

Ergot not confined to rye.

Characters. Form and size of the grains; color; external and internal appearance; odor; taste; changes which it undergoes.

Contains *Ergotin,* and an *oil.*

Oleum Ergotæ.—Properties.

Medical Properties.—Effects on the cerebrum, on the circulation and stomach; peculiar effect upon the uterus; deleterious impression on the constitution when used in food; employment n parturition; use as a hæmostatic, and with other effects.

Mode of exhibition. Given in powder. Dose, ℈j, repeated, if necessary, in parturition; or grs. x to xv, two or three times daily, for other purposes.

The *infusion* made by adding ʒj to fʒiv boiling water, macerating until cold, and straining. Dose, fʒj.

Tincture of ergot. Dose, fʒj.

Vinum Ergotæ, U. S.; *Wine of Ergot.*—Mode of preparation. Dose, fʒi to ij.

Oil of ergot given in doses of gtt. xx to xl.

ARTERIAL SEDATIVES.

HITHERTO we have had under consideration those articles which produce an excitant impression upon the actions and functions of the system. We have now to consider such as have a reverse tendency, or depress the powers of life and the movements of the organs.

Sedatives are divided into such as are more especially directed to the arterial, and such as act upon the nervous system; but from the close connection between the two systems, there is difficulty of discrimination. They are divided into two classes, from the more decided effects which they present upon the one or other of the two systems.

Arterial Sedatives may be defined to be substances which depress the circulation; diminish the force and frequency of the heart's action; lower the pulse; diminish the number of respiratory inspirations; but which, with reduction of power, do not derange the actions of the nervous system.

In connection with the effect upon the general circulation, is an impression upon the capillary circulation. This is attended with reduction of heat; and hence the term REFRIGERANTS has sometimes been employed.

They are used in diseases of excitement, where this is preternatural, with heat and fever; and in inflammations.

In such affections there is frequently an alteration of the blood, with superabundance of plastic material. This results from a change induced in the organic constitution of the blood by the excitement or inflammation; one of the modes of acting beneficially is by the prevention of such change. Explanation.

They are contra-indicated in typhoid affections, and in those of debility generally.

While acting in the way stated, in larger quantities or more concentrated they become irritant. Illustrations.

They are employed, not as substitutes for actual depletion, where this is clearly indicated, but as valuable adjuvants to this treatment. Reason for this statement, and explanation.

ANTIMONIUM, *U. S.*

Antimony.

Changes of opinion with respect to this metal. The preparations of it are among the most depressing which can be brought to bear upon the animal economy; and are active in proportion to their solubility. When applied locally, they are irritant, and induce a peculiar impression, which upon the skin is pustular, followed by an eschar.

To the stomach and bowels they have a special tendency, which is only modified by peculiar circumstances; this is apparent in any way that they may be used.

When brought to bear upon the system, depression is exhibited by reduction of the pulse and of the heart's action, by diminished frequency of the respiratory movements, by relaxation of the cutaneous and mucous surfaces, and increase of secretion from the emunctories generally. The muscular system is also influenced and rendered less capable of effort, while the nervous system is calmed into quiescence.

The effect upon the pulse is very decided, and the reduction of the number of respiratory acts is in accordance with it.

A peculiarity possessed by antimonials is persistence in their effects. This is exhibited by a continuance of them after the exhibition had been suspended. When they are exhibited for a length of time, the system comes so fully under their influence, as to give rise to the expression *Antimonial saturation.* Symptoms of this condition.

The absorption is proved by detection in the viscera, in the blood, and in the urine.

There is no difficulty in understanding how the soluble preparations are active by absorption; when they are inert from insolubility, they become active by chemical agents in the

stomach and in the tissues, which render them soluble. Explanation of these means.

Under particular circumstances, an avoidance of their operation upon the stomach and bowels may be secured, so as to produce a *tolerance* of administration. Mode of securing this, and circumstances which aid it. Advantage taken of this tolerance in treating disease; and the rule advocated that, where tolerance has ceased and disorder of the stomach has come on, the medicine should be suspended. Necessity of strict adherence to regimen when employing antimonials.

Modifying circumstances of age and sex upon the administration.

The poisonous effects induced by excessive or accidental exhibition are characterized by intense prostration. Symptoms. Or by irritation of the internal organs, with the same impression upon the general system. Mode of treating such cases.

Vomiting and purging are in themselves sources of depression, and these may add to that induced by the preparations.

Where applied to the skin, and an irritant impression made, the same tendency to prostration may be exhibited.

The contra-indicating conditions are irritability of the stomach and debility of the general system.

From what has been stated, it becomes apparent that the antimonial preparations are best employed in inflammatory affections and in those of high febrile excitement. In these cases, not only is their depressing influence salutary, but they prevent the results of inflammatory action upon the blood, and the generation of plastic products. They are best suited, therefore, to the early stages.

When given in exceedingly minute doses, no immediate impression is perceived; but after some time the effects are exhibited, and disease of a chronic character may yield to them. In these effects resides what has been termed the *alterative action*.

Metallic Antimony is active only in proportion to the change which it undergoes in the stomach; this depends upon the amount of muriatic or soluble chlorides there met with. It is consequently an uncertain mode of exhibition.

ANTIMONII ET POTASSÆ TARTRAS, *U. S.*

Tartrate of Antimony and Potassa.

Tartar Emetic; *Antimonium Tartarizatum.*

Mode of preparing. Rationale.

Form of crystals. Color. Transparency. Effects of exposure. Taste. Solubility in water and alcohol.

Changes in watery solution.

Incompatibles. Antidotes.

Reason for preferring the crystals to the powder. Adulterations.

Medical Properties.—Certainty and value as an antimonial preparation. Effect upon the stomach and system. Poisonous effects. Large quantities that may be taken by establishing a tolerance. Cases to which adapted. Value in diseases of the chest, and stage of administration. Mode of preventing plastic formations. Danger of inordinate doses. Combinations. Dose, gr. $\frac{1}{12}$—$\frac{1}{8}$—$\frac{1}{4}$, repeated every two hours, under ordinary circumstances.

Employment as an alterative in dose of gr. $\frac{1}{32}$ to $\frac{1}{16}$, and repeated, so that gr. $\frac{1}{4}$ to $\frac{1}{2}$ may be taken in the twenty-four hours.

Vinum Antimonii, U. S.; *Antimonial Wine.*—Mode of preparation. Strength, grs. ij to f℥j. Dose, gtt. xv to f℥j; for children, less.

Unguentum Antimonii, U. S.; *Antimonial Ointment.*—Mode of preparing. Effect upon the skin. Mode of applying it. Cases to which adapted.

Sulphurets of Antimony.

These are three.

Kermes Mineral.—Mode of preparation. Characters and employment.

Golden Sulphuret. Preparation and uses.

Antimonii Sulphuretum Precipitatum, U. S.; *Precipitated Sulphuret of Antimony.*—Mode of preparation. Rationale.

Color; form; taste. Solubility in water. Composition.

Medical Properties.—All the sulphurets uncertain on account

Nitre

[illegible]

[illegible]

Dose grs V
" grs x — Diuretic

— grs 11 or 2/- Diaphoretic

[illegible]

Cathartic
Nit. Pot. 3 i
Sod. Sulph. gr i
Calomel gr VI

[illegible]

[illegible] something more genial.

[illegible]

of the varied proportion of the oxide in their composition, and the amount of a chemical agent in the stomach. Used more as alteratives. Dose, gr. ½ to 3. Combinations. Emetic, in grs. x to xx.

PULVIS ANTIMONIALIS.

Antimonial Powder.

Not retained in the *U. S. Pharmacopœia.* Called *James' Powder.* Mode of preparation. Characters. Dose, gr. j to v. Causes of uncertainty.

POTASSÆ NITRAS, *U. S.*

Nitrate of Potassa.

Nitre. Saltpetre. Sources. A product of the soil in India; and prepared artificially. Found in plants.

Rough nitre. Mode of refining it.

Properties; form of crystals; transparency; appearance of surfaces. Taste. Fusible by heat. Contains no water of crystallization, only mechanically. Crepitates when thrown upon coals. Solubility in water. Composition. Uses in the arts.

Medical Properties.—Sedative to the circulation, and acts upon the skin and kidneys. Mode of acting as a refrigerant. Liquefacient action from continued employment. Poisonous local action. Employment in medicine as an adjuvant to depletory measures. Dose, grs. v to x, in powder or solution.

Nitrous Powders. Composition.

THE VEGETABLE ACIDS.

Most agreeable as sedative and refrigerant remedies, and employed conveniently in the form of drinks. Abundant in fruits, where they are occasionally associated with vegetable jelly and sugar; the latter is usually added.

ACIDUM TARTARICUM, *U.S.*

Tartaric Acid.

Source. Mode of preparation.

Properties. Taste. Solubility. Mode of employment.

ACIDUM ACETICUM, *U.S.*

Acetic Acid.

Source. Officinal acetic acid, sp. gr. 1.041. Diluted, sp. gr. 1.004. *Vinegar. Distilled Vinegar. Concentrated.* Employment in pharmacy, and as a prophylactic.

ACIDUM CITRICUM, *U.S.*

Citric Acid.

Contained in *lemons, oranges, &c.*

Lemon-juice. Mode of preserving. Lemonade.

Pure citric acid in crystals. Color; taste; solubility; corrosive properties. Mode of preparation. Powder sometimes contaminated with tartaric acid. Test for this.

Solution made with ʒixss to Oj water, and 4 drops oil of lemons, to resemble lemon-juice. From this lemonade may be made.

Advantage of this refreshing beverage. Its use in scurvy. Necessity of employing the acids or fresh vegetable juices on long voyages as a preventive of scurvy.

NERVOUS SEDATIVES.

Such substances as produce a marked diminution of nervous power, and affect the sensorial functions at the same time that they reduce the force of the circulation, are termed nervous sedatives. It is probable that in this case the primary impression is made upon the nervous system, which is manifested by abstraction of nervous power in organs under their control. All of them are, in inordinate quantity, most energetic poisons. Under proper regulation, they are applicable to diseases of excitement, whether nervous or vascular. In most of the systematic arrangements, they have been classed with the narcotics; but as they differ essentially from these in their mode of operation, they are best treated of by themselves.

DIGITALIS, *U. S.*

Foxglove.

The leaves of the *Digitalis purpurea. Foxglove.*

Description of the plant. Variety *D. alba.* A native of England and the continent of Europe, but cultivated in this country.

Mode of collecting, preparing, and preserving the leaves. Time when gathered. Should be of good size, well formed, and free from decay.

Properties of the dried leaves; color; odor; taste; cause of deterioration. Powder. Relation to water and alcohol. Two forms in the market. The best is the English.

Contains a peculiar principle, *Digitalin.*

Properties of this principle exceedingly active.

Medical Properties.—Has a decided sedative influence on the

nervous and arterial systems. It also acts upon the kidneys. Disagreeable effect upon the brain and stomach. When too great a quantity is taken, symptoms of poisoning, with extreme prostration, occur. Effects in small doses upon the pulse. Degree of reduction. Peculiarity, that, when once induced, the effect is persistent. Another peculiarity is the tendency to a cumulative effect. Uses in diseases accompanied with excitement. Not a succedaneum for the lancet. Value in phthisis, mania, and affections of the heart. Importance of attending to position.

Administration in powder or pill, gr. ½ to j, repeated two or three times daily.

Infusum Digitalis, U. S.; *Infusion of Digitalis.*—Mode of preparation. Dose, f℥ss.

Tinctura Digitalis, U. S.; *Tincture of Digitalis.*—Strength. Dose, gtt. x to xx.

Mode of relieving the poisonous effects.

TABACUM, *U. S.*

Tobacco.

The leaves of the *Nicotiana tabacum.* A native of tropical America, but diffused. Varieties.

Mode of cultivating and curing tobacco.

Properties in the dried state. Relations to water and alcohol. Contains a peculiar principle, *Nicotina*, and from it is obtained an *empyreumatic oil.*

Medical Properties.—A powerful nervous sedative, capable of inducing inordinate depressing effects. Death occurs from its incautious use. Symptoms and pathological appearances. Active when applied to any of the surfaces. Action on the stomach; on the kidneys and secreting organs. Uses in muscular spasm, hernia, &c. Mode of administration. In doses of five or six grains, it nauseates and vomits. Seldom given by the stomach in substance.

Infusum Tabaci, U. S.; *Infusion of Tobacco.*—Mode of preparing. Half of the quantity to be administered at once. Danger in giving by the rectum.

11-22.92

Digitalis -

Effects of small doses — Sometimes
[illegible] the pulse - It may [illegible]
great deal -
When it [illegible] produces its effect
[illegible]
Is a heart Sedative - Promotes diuresis.
Produces a Sedative effect on the nervous system
In the treatment of pneumonia, in the last
stage - Mercury is [illegible]
In [illegible] stage -
Is a remedy for hypertrophy of the
heart - In the heart with chronic or
anemic condition -

Infusion	
Digitalis	ʒ i
Aqua Bull	ʒ iii
Aqua Cinn	ʒ i
Tinct.	
Digitalis	ʒ ½ ii
Aconite	c i

There is a [illegible]

Tobacco.

Increases the [illegible]
kidneys -
Infusion
Tobacco ʒ i
Aq. Bull ℥ i
use half quantity at once
more danger by the mouth - than
by the [illegible] because it will act as
[illegible]

2

Ac. Volatile gtt vi
Laud ℥ 1
Unguentum

} Use externally.

Aconite

Given it is taken into the stomach

Fever burning

Rheumatism

Heart disease

Tinct. Aconite ℥ii to ℥ss 01

℥ Spirit Camph. Ammon.
Spirit Carb. Ammon.

℞
Aconite gtt i
Laud ℥i

VINUM TABACI, U.S.; *Wine of Tobacco.*—Use as a diuretic; as a nauseant. Dose, gtt. x to xxx.

UNGUENTUM TABACI, U.S.; *Tobacco Ointment.*—Mode of preparing. Employment. Value as a discutient.

ACONITI RADIX, *U.S.*

Aconite Root.

The root of the *Aconitum napellus.*

ACONITI FOLIA.

The leaves of the *Aconitum napellus.*

Called *Wolfsbane* and *Monkshood.* A native of Europe, but introduced into the United States.

Properties of the fresh leaves; odor; taste; effect upon the tongue. Root mistaken for the radish, hence specific name; the leaves, when young, have also been mistaken for celery.

Properties of the root. Form; color; odor; taste. Also of the dried leaves.

They both contain a peculiar alkaloid principle, *Aconitina*, connected with an acid, and a narcotic fatty oil. *Aconitina* is exceedingly active.

Medical Properties.—A powerful irritant to the skin, when locally applied. A powerful sedative, with more anodyne property than usually possessed by the class. Peculiar effect upon sensation. When carried too far, prostration and death are produced. Employment.

EXTRACTUM ACONITI, U. S.; *Extract of Aconite.*—Prepared from the fresh leaves, by inspissating the juice. Dose, gr. $\frac{1}{4}$ to ℈j, every two to six hours, cautiously administering.

EXTRACTUM ACONITI ALCOHOLICUM, U.S.; *Alcoholic Extract of Aconite.*—Mode of preparing. Dose, gr. $\frac{1}{6}$ to j.

TINCTURA ACONITI FOLIORUM, U. S.; *Tincture of Aconite Leaves.*—Mode of preparing. Dose, gtt. xx to xxx.

TINCTURA ACONITI RADICIS, U.S.; *Tincture of Aconite Root.*—A saturated tincture. Dose, gtt. v, three times daily.

Danger of confounding these two tinctures.

External use of the tinctures.

Employment of *Aconitina.*

ACIDUM HYDROCYANICUM, *U.S.*

Hydrocyanic Acid.

Prussic Acid.—Remarks on its production from certain plants; belonging to *Pruneæ* and *Amygdaleæ*, in connection with an oil, which, when obtained from bitter almonds, is called

Oleum Amygdalæ Amaræ, U.S.; *Oil of Bitter Almonds.*—Properties. Dangerous characters. When diluted with alcohol, constitutes the *Essence;* which is employed as a flavorer.

Cherry Laurel Water.—Mode of procuring it from the leaves of the *Prunus lauro-cerasus.* Not employed in this country, from its uncertain strength.

The *officinal Prussic Acid* is solely employed in medicine. Mode of preparing it. Rationale.

Method to obtain it extemporaneously.

Properties; color; odor; taste; volatility; strength; mode of keeping; acid reaction.

Medical Properties.—Most powerful sedative, and in large doses possessed of most energetic power. Effects on the system in small doses. Liability to affect the head. Suddenness of its poisonous impression. Mode of operating. Proofs of absorption. Mode of treatment. Employment. Dose, gtt. j to ij, in emulsion. External use.

POTASSII CYANURETUM, *U.S.*

Cyanuret of Potassium.

Mode of preparation. Rationale.

Properties. Employment. Dose, gr. $\frac{1}{8}$ to $\frac{1}{4}$. Mode of administration and advantages.

Hydrocyanic Acid

Extemporaneously

Cyanide Silver 5i

mur. Acid 5ii 41

water ℥31

Keep in stock

Antidote

probably best antidote

ALTERATIVES.

ALTERATIVE medicines are those which produce such salutary changes in the organs and tissues as to permit healthy action in them to take the place of diseased action. Their operation is more especially directed to nutrition. When this is perverted and vitiated, they alter its character, and aid in the removal of the consequences, metamorphoses of structure.

Under proper control, they act slowly, but safely; no appreciable action is to be discovered; but, with the removal of diseased structural conditions, disordered functions assume their natural state.

Their impression appears, in the first instance, to be directed upon the fluids, and through them upon the solids; yet they may more or less affect the solids by a direct impression.

Many medicines, not placed in this class, exert an alterative action, in consequence of the secondary or therapeutical effects which are induced; but these do not bring their impression directly to bear upon nutritive materials, or nutrition; where benefit results in the treatment of diseases, it is a remote, and not a direct effect. Illustration.

The articles placed in this class produce injurious effects when carried too far, by breaking down the constitution of the blood, saturating the system, and inducing a state of cachexy, if not of disease, which assumes a peculiar character. These evil effects should always be anticipated, and guarded against.

A *liquefacient action* is attributed to them.

HYDRARGYRUM, *U. S.*

Mercury.

Quicksilver.—Sources in nature.

The metal may be swallowed without injurious consequences, passing through the bowels, and, unless undergoing chemical action, not inducing constitutional or other disturbance. The use of crude mercury abandoned.

When mercury is employed, it is in some form which enables it to come intimately into contact with the tissues and organs. The constitutional effects of all the preparations are similar. They are called *Alterants*, in consequence of the revolutionizing effect upon the system.

Mercury is absorbed, and taken into the system. Proofs of absorption. Necessity of conversion into soluble compounds, to be absorbed. Individuals exposed to the vapor of mercury liable to its impression. Mode in which mercury is most readily rendered soluble and fitted to enter the circulation. Even the vapor amenable to this mode of entrance.

Effects of mercury. These first perceived in the secerning and exhaling operations, the least and mildest impression being made upon the secretions. Particular action upon the liver.

When a constitutional impression has been made, it is evinced by the action upon the gums and the salivary glands; this is called *Salivation* or *Ptyalism*. When this constitutional impression is made, there are presented a general relaxation of the tissues, and a disposition to free secretion from all secerning surfaces, with an increase of absorption and diminution in the amount of solids and fluids, the glandular system feeling the impression. In this wasting operation, we have what has been termed the *resolvent* or *liquefacient* action. It is dependent upon the loss of animalized matter. The blood undergoes a change from mercurial influence, losing color, consistence, and coagulability. The plastic elements of this fluid are so reduced as to diminish its capability of nutrition; and this is a further source of waste of the body, as well as of an impaired and vitiated condition.

When the impression is inordinate, or in peculiar constitutions, the entire animal system becomes so affected as to assume a

morbid condition, and an especial disease is engrafted upon the system, called *Morbus mercurialis*, exhibited in local and general phenomena. Phenomena of this disease. Excessive salivation. Erythema mercurialis. Febris mercurialis. Nervous perturbation. Excessive general prostration.

Modes of detecting the early constitutional action. Difference in the susceptibility of individuals. Caution with respect to the cumulative effects, and circumstances which favor it.

The question discussed—Are mercurials sedative or stimulating?

Indications with which preparations of this metal are used:—

To produce salivation, with the view to a revulsive action. An improper application of them; reasons for this opinion.

To promote the secretions.—This covers a large field of application, as most acute diseases are attended with suppression or vitiation of the secretions, as fevers and inflammations. Under this head comes their application to derangements of the liver, with the view to acting on which organ they are constantly employed. Rules to be followed in their use, with a view to the above indication. Modes of best securing the end designed.

To control inflammatory action.—With this design, mercury is exhibited in the stage of inflammation, connected with the changes and new formations which result from its persistence. A modification of capillary action is brought about by it, and a dissolvent or liquefacient action exerted upon plastic deposits. Instances where the mercurial plan of treatment is best suited to the case. Explanation of the distinct adaptation of the sedative or antimonial preparations, and of the mercurial to inflammatory conditions.

Greater adaptation to low grades of inflammation also explained.

To quicken absorption.—The mode of operation in this way having been shown, the advantage in dropsical affections, and tumefaction of glandular and other structures, can be understood as depending upon the general waste of the albuminous and animalized materials of the body. In quickening absorption, assistance is afforded to the action of other medicines, as diure-

tics. Assistance to the latter class of remedies in dropsy depending on hepatic derangement.

To produce a general revolutionizing impression.—As this more strictly appertains to the remedy as an alterative, it must be referred to the impression on the tissues and nutritive fluid, to a modification of nutrition, which depends on the liquefacient action. It is advantageous when it breaks up morbid tendency, or diseased deposits, but is liable to be carried too far, and produce the injurious effects of the remedy. Remarks on the treatment of syphilis, and the abuse of mercurials. Necessity of an avoidance of mercury in scrofula, and cachectic states of the system.

The mode of administration, so as to produce and fulfil the several indications above stated, will be detailed under the head of each preparation.

Method of treating inordinate salivation, and of alleviating the constitutional impression when injurious.

Cautions with regard to exposure to cold, and means of guarding against it.

The preparations of mercury are numerous; they will be taken up in the following order:—

1. *Of Metallic Mercury.*

In all these preparations, the metal is most minutely divided, and barely changed in its chemical relations. It is, however, in a state to fit it for chemical action when brought in contact with substances which will render it soluble.

UNGUENTUM HYDRARGYRI, *U. S.*

Mercurial Ointment.

Blue Ointment.—Ingredients, and method of preparing. State in which the metal exists in it. Effects of age.

Properties; color. Appearance under a magnifying glass. Adulterations.

Employment. Mode of using it.

CAMPHORATED MERCURIAL OINTMENT.

EMPLASTRUM HYDRARGYRI, *U. S.*

Mercurial Plaster.

Constituents and mode of preparation. Consistence. Properties. Employment, and mode of application.

PILULÆ HYDRARGYRI, *U. S.*

Mercurial Pills.

Ingredients, and mode of preparation. Change in the metal.

Properties; consistence; color. Effect of age. Effect of too much trituration.

Proportion of mercury in it.

Adulteration.

Medical Properties.—A mild preparation. Used in doses of grs. v to x, with the design of acting on the bowels, followed by a mild cathartic. Advantages of such employment. Or with a view to a decided impression on the tissues, in doses of grs. j, ij, iij, repeated at proper intervals. Combinations with it, and their advantages. Diseases in which thus used.

Mode in which it becomes active, and circumstances productive of energy.

HYDRARGYRUM CUM CRETA, *U. S.*

Mercury with Chalk.

Mode of preparation. State of the metal. Proportion of ingredients.

Color, appearance, and taste of the powder.

Employment as an alterant and antacid. Adaptation to the cases of children. Dose, grs. ij to iij: for adults, grs. v to xx. Combinations. Cause of irritation of the stomach sometimes produced by it.

HYDRARGYRUM CUM MAGNESIA; *Mercury with Magnesia.*—Properties and uses.

2. *Oxides of Mercury.*

HYDRARGYRI OXIDUM NIGRUM, *U. S.*

Black Oxide of Mercury.

Mode of preparing. Rationale.

Properties. Color of the powder; odorless; tasteless; insoluble, except in acids. Effect of exposure.

Medical Properties.—An active but uncertain preparation; causes of this. Effect of the chlorides upon it. Employment. Dose, gr. $\frac{1}{4}$ in pill.

Black Wash.—Mode of preparation. Uses.

HYDRARGYRI OXIDUM RUBRUM, *U. S.*

Red Oxide of Mercury.

Mode of preparing. Rationale. Called *Red Precipitate.*

Properties. Form; color; taste; insolubility in water.

Medical Properties.—Escharotic, and therefore poisonous; used for external application. Cases to which adapted. Mode of using it.

Unguentum Hydrargyri Oxidi Rubri, U. S.; *Red Precipitate Ointment.*—Mode of preparation. Uses.

Yellow Wash.—How prepared. Uses.

3. *Chlorides of Mercury.*

HYDRARGYRI CHLORIDUM MITE, *U. S.*

Mild Chloride of Mercury.

Calomel.—Mode of preparing. Rationale. Necessity for washing it.

Form when first prepared; mode of distinguishing between it and corrosive sublimate in mass. Form, as kept in the shops; color; without odor or taste; insolubility in water and alcohol; effect of exposure; tests of purity.

Action of the stronger acids, and incompatibles. *Howard's Calomel.*

Medical Properties.—A mild preparation, which is much in use either to improve the secretions, to promote the activity of, and to unload the liver, or for a general impression.

The dose varies according to the purpose desired; as a purgative, larger doses are required (see calomel as a purgative). For the alterative impression, gr. $\frac{1}{2}$ to j may be given two or three times daily. In the treatment of inflammation, every two hours. Cases to which adapted. Combinations. Necessity of its conversion into a soluble compound, and the probable mode by which this is accomplished. Error of supposing it innoxious. Abuse and evil consequences of too liberal employment of it.

Advantage of employing it in very minute doses, as gr. $\frac{1}{6}$ repeated.

HYDRARGYRI CHLORIDUM CORROSIVUM, *U. S.*

Corrosive Chloride of Mercury.

Corrosive Sublimate.—Mode of preparation. Rationale.

Properties. Form; transparency; taste; solubility in water and alcohol. Effect of exposure on solution.

Incompatibles. Tests.

Medical Properties.—In minimum doses, it acts as an alterative, and can produce all the effects peculiar to mercurials. May be managed so as to fulfil the several indications; but generally employed in chronic diseases. Dose, gr. $\frac{1}{16}$ to $\frac{1}{12}$. Administered conveniently with *Compound Syrup of Sarsaparilla.* Poisonous effect. Antidotes. Treatment.

External employment.

4. *Iodides of Mercury.*

HYDRARGYRI IODIDUM, *U. S.*

Iodide of Mercury.

Protiodide of Mercury.—Mode of formation.

Properties. Form; color; insolubility in water and alcohol. Solvents. Volatility. Effect of exposure. Composition.

Medical Properties.—An excellent resolvent. Cases to which adapted. Explanation of its action. Dose, gr. $\frac{1}{4}$ to 1, in pill.

Used externally in an ointment.

HYDRARGYRI IODIDUM RUBRUM, *U. S.*

Red Iodide of Mercury.

Biniodide of Mercury.—Mode of preparation. Rationale.

Properties. Form; color; volatility; solubility in iodide of potassium.

Medical Properties.—Acrid and poisonous in over-doses; in minute doses, alterative. Dose, gr. $\frac{1}{16}$, in pill, or compound solution.

Used extensively in the form of an ointment.

5. *Salts of Mercury.*

HYDRARGYRUM AMMONIATUM, *U. S.*

Ammoniated Mercury.

White Precipitate.—Chemically *Amido-Chloride of Mercury.* Mode of preparation. Rationale.

Composition.

Properties. Color of powder; taste; solubility; adulterations.

Irritant and poisonous. Accidents from taking it.

Used externally in the form of

Unguentum Hydrargyri Ammoniati, U. S.; *Ointment of Ammoniated Mercury.*—Mode of preparing. Uses.

Application of the dry powder.

HYDRARGYRI NITRAS.

Nitrate of Mercury.

Mode of preparation and rationale.

Composition and properties. From it is made

Unguentum Hydrargyri Nitratis, U. S.; *Ointment of Nitrate of Mercury. Citrine Ointment.*

Ingredients, and mode of preparation. Reaction of the constituents.

Properties; consistence; color. Changes which it undergoes from age.

Employment as a stimulating application. Cases to which adapted.

HYDRARGYRI SULPHAS FLAVUS, *U.S.*

Yellow Sulphate of Mercury.

Turpeth Mineral.—Mode of preparation. Rationale.

Form—yellow powder; insoluble; acrid.

Employment as an errhine.

6. *Sulphurets of Mercury.*

HYDRARGYRI SULPHURETUM NIGRUM, *U.S.*

Black Sulphuret of Mercury.

Ethiops Mineral.—Mode of preparation. Composition.

Properties. Mild in its action. Dose, grs. v.

HYDRARGYRI SULPHURETUM RUBRUM, *U.S.*

Red Sulphuret of Mercury.

Cinnabar. Native. Mode of preparing artificially.

Properties. Form; color; volatility; composition.

Used for fumigation. Mode of employment. Cases in which used.

Employed in the arts under the name of *Vermilion.*

IODINIUM, *U.S.*

Iodine.

Source and discovery. State in which it exists in nature, and mode of obtaining it. Chemical character and properties. Form; color; odor; taste; volatility; solubility in water, in alcohol, and ether.

Medical Properties.—Discovery of its effects in connection with *burnt sponge.* Effect upon the skin, and irritant impression. Same when taken too largely internally. Stimulative impression on the general system, and especially on the nervous centres. Action on the secerning organs. Proofs of absorption. The wasting effect upon the solids, and cachexy brought on by its improper administration. Resolvent effect. Poisonous action. Employment and advantages of iodine in goitre, and scrofula, and other diseases.

Dose, gr. $\frac{1}{4}$, repeated two or three times daily.

Tinctura Iodinii, U. S.; *Tincture of Iodine.*—Mode of preparation. Reaction between ingredients. Dose, gtt. x to xx. Mode of administration. Convenient for local impression.

Unguentum Iodinii, U. S.; *Iodine Ointment.*—Mode of preparation. Properties. Employment.

POTASSII IODIDUM, *U. S.*

Iodide of Potassium.

Mode of preparation. Rationale.

Form; color; taste; solubility; effect on iodine in solution. Composition. Incompatibles.

Adulterations. Tests.

Medical Properties.—Effect in large doses irritating. Absorbed. General effects in small doses. Action on the kidneys. Injurious impression. Cases in which employed.

Dose, grs. ij to v. Mode of administration.

Tinctura Iodinii Composita, U. S.—*Ingredients, and mode of preparation.* Dose, gtt. x to xx.

Liquor Iodinii Compositus, U. S.; *Compound Solution of Iodine.*

Lugol's Solution.—Ingredients, and mode of preparation.

Dose, gtt. x to xxx. Cases to which adapted.

Unguentum Iodinii Compositum, U. S.; *Compound Ointment of Iodine.*—Used for the same purposes as the simple ointment.

Employment of *Iodine* and *Iodide of Potassium*, in the form of baths.

Iodine

Discd 1811 Original

Derived from Nature — Found in sea water — Sea weeds contain Iodide of Sodium & Potassium — to which we add Sulphuric Acid. Iodine is precipitated which being collected is dried —

The chief use of Iodine is in Goitre — Has been used in the form of Ointment — 4 grains to the ounce of Lard — Sometimes has been used with — The dose may be from 1 to 5 drops in water — Acts as a diuretic — Poisonous effects — Symptoms of Poisoning — Local irritation —

It is antidoted by Ammoniated Copper — Starch, Albumen — Lime water — Milk of

Iodine 5 grs to the oz of alcohol —

Iodine 21
Rectified Spirit } Liniment
Water 3ss VI

Iodide Potassium

Made by Putting Iodine into a Solution of Potash — boiling with charcoal

Impurities with Hyposulphite of Soda

Nitrate of Silver —

Test — add drops of Chloride Barium if SO_4 it will give a white colour of the Iodide of Silver —

Dose [illegible] of the large dose

Actions & Uses — Expectorant & Iodine

If [illegible] for [illegible]

of the system — [illegible]

[illegible] —

Liquor Iodi

Take 22 grs Iodine

Pot. Iod 45 grs Distilled Water —

ARSENICUM, *U. S.*

Arsenic.

Inert in its pure state; but in combination one of the most energetic substances in the Materia Medica. Effects—local or general. Symptoms of poisoning. Post-mortem appearances. Quantities which have occasioned death. Cause of exemption when surprisingly large quantities have been swallowed. Impression upon the stomach by small doses. Impression upon the system, and symptoms of a constitutional action. Production of slow poisoning. Proofs of absorption. Evidence of degeneration of the blood under its action. Antiseptic properties.

Anti-paroxysmal properties of the preparations. Employment in neuralgia, in skin diseases.

Contra-indications. Treatment of poisonous impression, and antidotes.

ACIDUM ARSENIOSUM, *U. S.*

Arsenious Acid.

Arsenious Acid; White Oxide of Arsenic.—Native, or prepared. Mode of formation.

Refined by sublimation.

Glacial White Arsenic.—Form; color; transparency; change from the action of the atmosphere; reduction to powder; solubility; odor when burnt; taste. Composition.

Medical employment. Dose, gr. $\frac{1}{16}$ to $\frac{1}{12}$, three times daily. Antidote, and mode of treating poisonous effects. External employment referred to *Escharotics*.

LIQUOR POTASSÆ ARSENITIS, *U. S.*

Solution of Arsenite of Potassa.

Fowler's Solution.—Mode of preparation. Ingredients and strength. Rationale.

Composition.

Employment. Uses to which adapted. Dose, gtt. v to x.

Antidotes.

EMETICS.

THIS class includes such substances as produce a discharge of the contents of the stomach through the cardiac orifice and the mouth. The act itself is called *Vomiting*. It is a highly complex operation, requiring the consent and simultaneous movement of a number of organs. These are the stomach and throat, the respiratory apparatus and abdominal muscles, with the nervous arrangement controlling them.

The question considered: Is the stomach active or passive in the act of vomiting.

Reasons for supposing it but little active. Yet an antiperistaltic movement admitted to take place, which aids the operation of the other organs.

Mechanism of vomiting explained. The part performed by each organ interested, pointed out, and the several steps detailed.

Proof of the necessity of the nervous connections, and of their influence in the act of vomiting.

The doctrine of reflex action applicable.

Phenomena attendant upon the operation of an emetic.

Matters ejected from the stomach.

Other articles besides those included in this class may produce vomiting. Reasons for this given.

Besides the application to the stomach, an emetic effect may be induced if the articles are directed to other organs, as the rectum, the skin, or thrown into the bloodvessels.

An emetic effect not invariably produced; but an impression may be made on other organs, as the bowels, skin, or kidneys. Reasons for this.

Vomiting

There is considerable difference among the members of this class. Hence latitude of selection. They differ in power, in duration of effect, and capability of impressing the general system. Much depends upon whether their action is exerted locally upon the stomach, or takes place by absorption.

They are employed with a variety of indications:—

1. *With the view of evacuating the stomach.*—As in cases of ingestion of poisons; where there exist in the organ crude, indigestible substances, and where there is an overloaded state of it. Cases where they are advantageous in this point of view. Difficulty of action from insensibility of the brain, and means of obviating it.

2. *To unload contiguous viscera, and excite the portal circulation.*—Effects upon the pancreas, liver, lungs, and bowels. Cases in which this indication is important. Improper employment.

3. *To reduce arterial circulation, and relax the system.*—Effects of nausea. Effects from the direct action, and after depression; and from absorption. In this sense *Antiphlogistic.* Cases in point. Muscular relaxation attendant on their operation. Application of this. Free secretion from their use; and advantages of this mode of action.

4. *To produce powerful agitation of the whole system*, and a revolutionizing impression.—Employment with this indication in paroxysmal disease.

5. *With the view to revulsion by the stomach.*—Instances, in affections of the brain.

Contra-indications.

The amount of drink permitted to be taken should be regulated by the intention in prescribing them. By allowing diluents, or weak bitter infusions to be taken freely, we promote emesis, and at the same time facilitate their passage into the duodenum, and subsequent purgation. If the desire is to produce nausea, and retching, a limited supply should be permitted.

VEGETABLE EMETICS.

IPECACUANHA, *U.S.*

Ipecacuanha.

The root of the *Cephælis ipecacuanha*, a native of Brazil.

Description of the plant. Its discovery and introduction.

Mode in which the root is collected.

Called ANNULATED IPECACUANHA.

Properties; form; size of pieces; external conformation; portions into which separable; fracture; odor; taste; relation to water and alcohol. Powder.

Varieties. *Brown*, *Red*, and *Gray*. Difference between them.

Constituents. Emetia; fatty matter; starch, &c.

Emetia.—Characteristics. Effects of reagents.

UNDULATED IPECACUANHA; from the *Richardsonia scabra.*

STRIATED IPECACUANHA; from the *Psychotria emetica.*

Medical Properties.—Nature of its emetic action; prompt, safe, and efficient. Large doses not poisonous because not corrosive. Employed simply to unload the stomach, or impress the system. Cases.

Dose, grs. xx; repeated, if necessary. In smaller doses, well adapted to children. Mode of administration.

Advantages of combination.

Peculiar effects of ipecacuanha from idiosyncrasy.

Dose of *Emetia*, gr. $\frac{1}{4}$. Poisonous effects. Antidote.

Sudorific and expectorant effects will be considered under the appropriate classes.

VINUM IPECACUANHÆ, U.S.; *Wine of Ipecacuanha.*—Mode of preparation. Dose, f℥j to f℥ss, as an emetic.

SYRUPUS IPECACUANHÆ, U.S.; *Syrup of Ipecacuanha.*—Mode of preparation. A mild medicine, used advantageously for children. Dose, f℥j to f℥ss.

GILLENIA, *U. S.*

Gillenia.

The root of the *Gillenia trifoliata* and *G. stipulacea.*

Description of the plants. Indigenous.

The first is found on the eastern, the second on the western side of the Alleghany range.

Properties of the root. Form; structure; size; odor; taste. When gathered. Color of powder.

Contains extractive and resin.

Medical Properties.—Resembles ipecacuanha, but is not so powerful, and occasions less nausea. Dose, grs. xxx.

In small doses, tonic.

EUPHORBIA IPECACUANHA, *U. S.*

American Ipecacuanha.

Ipecacuanha Spurge.—Indigenous. Localities.

Description of the plant. Variation in the leaves.

Properties of the root in fresh and dried state.

Contains an acrid resin.

Medical Properties.—An irritating emetic. Has been used in fevers, &c. Dose, grs. x to xv.

EUPHORBIA COROLLATA, U. S.; *Large Flowering Spurge.*—Description of plant. Root similar.

Remarks on the *Euphorbiaceæ.*

SANGUINARIA, *U. S.*

Bloodroot.

Puccoon.—The root of the *Sanguinaria Canadensis.* An indigenous plant.

Description of the plant.

Properties of the root. Size; form; color; fracture; odor; taste. Color of powder.

Contains a peculiar principle, *Sanguinarina.*

Medical Properties.—A harsh, stimulating emetic, with some narcotic property. Dose, grs. v to xx.

Also expectorant in small doses.

TINCTURA SANGUINARIÆ, U. S.; *Tincture of Sanguinaria.*—Mode of preparing. Dose, f℥i—ij—iv.

As an expectorant, gtt. x to xx.

LOBELIA, *U. S.*

Lobelia.

The herb of *Lobelia inflata. Indian tobacco.* Indigenous.

Description of the plant. Time when gathered.

Appearance when dried. Color; odor; taste. Powder.

Contains a peculiar active principle, *Lobeliana*, with an acid.

Medical Properties.—A powerful emetic, producing most depressing effects on the economy; in some cases, has proved fatal. Cases in which efficacious. Expectorant properties. Dose in powder, grs. x to ℈j.

As an expectorant and nauseant, gr. i to v.

TINCTURA LOBELIÆ, U. S.; *Tincture of Lobelia.*—Strength. Dose, f℥j, as an emetic; gtt. x to xx, as an expectorant.

Caution in the use of solution. Mode of treating the poisonous effects.

SCILLA, U. S.; *Squill.*—A harsh emetic. Treated of under *Diuretics.* Dose, grs. v to x.

TABACUM, U. S.; *Tobacco.*—Has been spoken of previously. Most depressing emetic. Dose, grs. v to vj.

PULVIS SINAPIS; *Mustard Flour.*—A quick, stimulating emetic. Uses. Dose, ʒij, in warm water.

MINERAL EMETICS.

ANTIMONII ET POTASSÆ TARTRAS.

Tartar Emetic.

Before described. More slow in operating, but more thorough in its action; the impression lasting a long time, attended by

the effects of an arterial sedative. Employed in fevers, with engorgement of the liver and embarrassed portal circulation; in hepatitis, &c.

Advantageous application in inflammatory affections. Dose, grs. ij, dissolved in f℥ij of water, a tablespoonful to be given every ten or fifteen minutes.

Sometimes combined with ipecacuanha.

More apt to act upon the bowels. Reason of this. Dose, of antimonial wine, f℥j to f℥ss. For children, gtt. x to xx; or graduated to the age.

ZINCI SULPHAS, *U. S.*

Sulphate of Zinc.

Before considered as an astringent. It is powerful, but safe, exciting speedy vomiting, but without occasioning the same amount of nausea as many of the other articles. The dose should be a decided one; otherwise, if retained, and not thrown off, it occasions nausea and distress. It should be recollected, in giving it, that too large a quantity will occasion irritation and inflammation; hence the necessity of caution in repeating the dose. The constitutional depression is less than that of tartar emetic, or ipecacuanha. Used in cases of narcotic poisoning, on account of its prompt action. Used in croup, not for an antiphlogistic impression, but to dislodge false membrane, and make an impression on the throat, fauces, and glottis. Dose, grs. x to xv.

CUPRI SULPHAS, *U. S.*

Sulphate of Copper.

Also a prompt and efficient cathartic, acting as the preceding. Dose, grs. v to xv.

The same caution is necessary as in the case of the Sulphate of Zinc.

Other salts of zinc and copper, as the *Acetates*, possess emetic properties. Also *Turpeth mineral;* but this is too harsh in its operation. *Alum* has been alluded to.

CATHARTICS.

These are substances which operate upon the bowels, producing an increase in the amount or frequency of the alvine evacuations.

Catharsis, *purgation*, and *purging*, are terms used to express the effect. *Purgatives* is a synonymous term with Cathartics, although the first expression was originally employed in a general sense for all substances which freed the system of pecant matter.

Arrangement of the alimentary canal with reference to purgatives, and the office of the liver and pancreas.

Cathartics operate either, 1. By acting on the muscular coat of the intestinal canal. 2. By increasing the discharge from the muciferous glands and exhalants, thereby augmenting the amount of fluid in the canal. Or, 3. By occasioning an increased flow of bile and pancreatic secretion. Effects of bile itself on the bowels, and office in primary assimilation.

Though cathartics may be divided with reference to these modes of acting, many of them combine all of these modes.

There is a difference as regards the portion of the alimentary canal to which cathartics may be directed. Thus, some impress the whole tube, others the lower portion; while others, again, the upper. This difference of direction cannot be explained by mere solubility; it is inherent to the article.

Cathartics are subdivided in accordance with the intensity of the effect, and the nature of the evacuation. Hence we have Laxatives, Purgatives, Drastics, Hydragogues, Cholagogues, &c. Explanation of the distinction.

The impression made, and the character of the evacuation, will depend not only upon the substance employed, but the quantity of it. In this respect, an article may belong to one or

other of the divisions mentioned. The condition of the alimentary canal will also modify the operation. Instances of this.

Cathartics not only produce a local impression, but they have a decided tendency to operate when in any manner conveyed into the system. Thus, by absorption or injection into the vessels, a similar purgative impression is made. There is no doubt that physical influences within the intestinal canal also are operative. Illustration from exosmose.

Difference between a mere irritant and a purgative.

Length of time required for their operation different.

Importance of correctly appreciating the length of time.

Primary effects. Secondary effects. Mode of impressing the circulation and absorption; and revulsive effects.

Relation between the bowels and skin, and between the bowels and kidneys.

They are given in various diseases to fulfil several indications.

1. *To unload the bowels.*—Advantage of such an effect. Evils of confined bowels to the system, and locally. Where an excited or inflammatory condition exists, there is a necessity of subduing it before they are employed. Bad effects of gaseous evolution. Diseases in which this indication must be carried out.

2. *To deplete.*—Most important, in consequence of this power, in febrile and inflammatory affections. Their mode of relieving the force of the circulation. Circumstances of the system in which proper. Superiority to more debilitating remedies in certain cases. Diseases in which beneficial. Danger of their use in Typhoid Fever. Kind of purgatives required to deplete.

3. *To revulse.*—Power to carry out this indication exemplified by reference to the extent of surface on which they operate. Diseases where this is advantageous.

4. *To promote secretion.*—Cathartics accomplish this in two ways: 1st. By cleansing the mucous surface. 2d. By exciting the secreting surfaces to a more healthy action. Advantages of this in the treatment of all diseases. Symptoms which under this indication demand their employment. These appertain to the state of the organs and the character of the stools.

Information imparted by inspecting the alvine evacuations Normal and abnormal appearances of them.

Another mode of determining the state of the internal organs, and the necessity of cathartics, derived from the urine and the skin.

5. *To promote absorption.*—Mode of accomplishing this, and application.

6. *To act on contiguous viscera in the pelvis.*—Under this indication they come as Emmenagogues, where the uterus is the organ to be affected; but sometimes we desire to reach the genito-urinary organs. Illustration.

Many of these indications are simultaneously fulfilled in treating disease; and hardly a disease occurs in which but one is accomplished with advantage.

Abuse of cathartic medicines. State of the alimentary tube brought about by them when improperly used.

Contra-indications.

Advantages of combination.

Articles proper for administration to assist the operation of cathartics.

Mode of treating *Hypercatharsis.*

Laxative Articles of Food.—Bran bread; cracked wheat; corn meal; fruits.

Use and abuse of fruits; sugar; molasses.

VEGETABLE CATHARTICS.

TAMARINDUS, *U. S.*

Tamarinds.

The preserved fruit of the *Tamarindus indica.*

Description of the plant. An inhabitant of the East and West Indies.

Fruit. Properties of the pulp; odor; taste.

Constituents, sugar and vegetable acids, extractive, &c.

Mode of preparing the fruit. Characters in this state.

A mild laxative. Taken as a refreshing drink.

Enters into the composition of *Confection of Senna* and *Confection of Cassia.*

Infusion of *Senna* and *Tamarinds.*

CASSIA FISTULA, *U. S.*

Purging Cassia.

The fruit of the *Cassia Fistula*. A native of the East and West Indies.

Description of the tree.

Structure; size; color and composition of the fruit; a *Legume*.

Cassiæ Fistulæ Pulpa, U. S.; *Pulp of Purging Cassia*.—Mode of preparing it.

Properties; color; consistence; odor; taste.

Effects of exposure and chemical changes.

Contains sugar, gum, extractive, and vegetable acids.

Medical Properties.—Mild laxative; used to preserve the bowels in a laxative state.

Inconveniences. Rarely given alone. Dose, ʒj—ij—ʒj.

It is an ingredient of the Confection of Senna. A *Confection of Cassia* is directed by some of the Pharmacopœias.

MANNA, *U. S.*

Manna.

The concrete juice of the *Ornus Europæa*. A native of Italy and Sicily. Called *Manna Ash*.

Description of the tree.

Mode of extracting and collecting *Manna*. Cause of diversity in the varieties.

Flake Manna.—Time at which obtained. Form and appearance; color; fracture; consistence; structure; odor; taste.

Manna in Sorts.—When collected. Of what materials constituted. Appearance and consistence.

Fat Manna.—Time when obtained from the tree, and characteristics. Late in the season.

Solubility of *Manna* in water and alcohol. Adulterations. Contains *Manna sugar* or *Mannite*, and a resin.

Difference between *Mannite* and sugar with respect to vinous fermentation. Mannite will not ferment.

Medical Properties.—Laxative and nutritive. By itself, apt

to produce flatulence. Generally given in combination with senna, magnesia, &c. Aromatics, in combination, improve its operation. Dose, ʒss to j.

OLEUM RICINI, *U. S.*

Castor Oil.

The oil of the seeds of *Ricinus communis.* A plant probably tropical originally, but found to thrive in more temperate climates. Abundant in the south of Europe and the southern part of the United States. Called *Palma Christi.*

Description of the plant.

Form; color; appearance, and structure of the *Seeds.*

Modes of obtaining *Castor oil.*

Properties; consistence; color; odor; taste. Solubility in alcohol and ether. Effects of age. Adulterations.

Saponifies with the alkalies.

Contains *Ricin-oleine, Ricino-stearine, acid resin.*

Medical Properties.—A mild, effectual purge. Cases to which suited. Dose, fʒss to j.

Mode of exhibition. Dose as a laxative, fʒj to ij.

Combination with alkalies. *Mistura Olei Ricini.* Advantages of this preparation.

RHEUM, *U. S.*

Rhubarb.

The root of *Rheum palmatum* and other species.

Description of the plant; also of *Rheum undulatum, Rheum compactum, Rheum australe, Rheum rhaponticum.* Localities of each plant.

Commercial varieties.

Russian Rhubarb.—Form and appearance of the pieces; size; partial perforation; external color; fracture; appearance of the surfaces; odor; taste; sensation to the teeth; cause of this; color of saliva. Powder. Effects of age. Source and quality.

Sometimes called *Turkey Rhubarb.* Explanation.

China Rhubarb.—Form of pieces; external appearance and color; complete perforation; solidity; fracture; appearance of

the surfaces; odor; taste. Powder. Source; comparative value; adulteration; variety.

European Rhubarb.—Form of pieces; color; fracture; internal structure; odor; taste. Points of difference from the preceding.

The first two varieties are derived from Central Asia, where they are held as a monopoly by a tribe of Tartars. The third variety is obtained by the cultivation of the same plants in England and on the Continent. It has been introduced into the United States. Remarks on cultivation.

Rhubarb contains an odoriferous principle, Rheic acid. *Rhabarbarin, Resins, tannin,* oxalate of lime.

Relation of rhubarb to water and alcohol.

Medical Properties.—These vary according to the dose; in full doses cathartic, in small doses astringent. Reason for this diversity. As a cathartic, it is mild, acting on the muscular coat. Character of the stools. Proofs of absorption; Cases to which adapted. Dose, ℈j to ʒj. Mode of administration. In certain cases objection to its use. Combinations. As a tonic and astringent dose, grs. ij to v. Effect of roasting.

INFUSUM RHEI, U. S.; *Infusion of Rhubarb.*—Mode of preparing. Employment. Dose, fʒss to fʒj.

TINCTURA RHEI, U. S.; *Tincture of Rhubarb.*—Ingredients. Stimulating and laxative. Uses. Dose, fʒ to fʒss.

TINCTURA RHEI ET SENNÆ, U. S.; *Tincture of Rhubarb and Senna.*—*Warner's Gout Cordial.* Ingredients. Cases to which adapted. Dose, fʒss.

TINCTURA RHEI ET ALOES, U. S.; *Tincture of Rhubarb and Aloes.*—*Elixir Sacrum.* More active as a cathartic. Dose, fʒss. Uses.

TINCTURA RHEI ET GENTIANÆ, U. S.; *Tincture of Rhubarb and Gentian.*—Ingredients. Laxative and tonic. Dose, fʒss.

SYRUPUS RHEI, U. S.; *Syrup of Rhubarb.*—Laxative dose, fʒj to fʒj.

SYRUPUS RHEI AROMATICUS, U. S.; *Aromatic Syrup of Rhubarb.*—Ingredients. An elegant preparation. Laxative and Cordial. Employment. Dose, fʒj to fʒss.

VINUM RHEI, U. S.; *Wine of Rhubarb.* Dose, fʒj to fʒss.

Extractum Rhei, U. S.; *Extract of Rhubarb.* Made with alcohol. Dose, grs. v to xx.

Extractum Rhei Fluidum, U. S.; *Fluid Extract of Rhubarb.*—Mode of preparation. Advantages. Dose, f3j to ij.

Pilulæ Rhei, U. S.; *Rhubarb Pills.*—Mode of preparing. Advantage of combination with soap. Employment. Dose, grs. x to xx.

Pilulæ Rhei Compositæ, U. S.; *Compound Rhubarb Pills.*—Ingredients. More active than the preceding, and at the same time tonic. Dose, grs. x to xx.

SENNA, *U. S.*

Senna.

The leaflets of *Cassia acutifolia*, *Cassia obovata*, and *Cassia elongata.*

Description of these plants. Place of growth, Egypt and Arabia.

Varieties of senna, *Alexandria*, *Tripoli*, and *India.*

Alexandria Senna.—Composed of the leaflets of the *C. acutifolia*, and *C. obovata*, with those of *Cynanchum oleifolium*, or argel. Properties of each. Place of growth in Upper Egypt. Mode of collecting, and route to market. Distinguishing character of senna leaflets. Color; odor; taste. Other admixtures.

Tripoli Senna.—Afforded by a variety of the acute-leaved cassia. Appearance. Value. Source from which procured.

India Senna.—Afforded by the *C. elongata.* Form of the leaflets; color and general appearance; form of pod. Place from which procured; mode of collecting, and route to the market. An elegant variety of India, known as *Tinnivelly*, and another of fine quality called *Mecca Senna.*

Relations of senna to water and alcohol.

Constituents, *Cathartin*, extractive, chlorophylle, &c.

Medical Properties.—One of the most energetic of the class; operating on the whole track of the alimentary canal; producing watery, feculent discharges. Cases to which adapted. Dose of powder, 3ss to ij; rarely given in this way.

Infusum Sennæ, U. S.; *Infusion of Senna. Senna Tea.*—In-

gredients, and mode of preparation. Necessity of excluding the atmosphere. Advantages of combination.

Tinctura Sennæ et Jalapæ, U. S.; *Tincture of Senna and Jalap.*—Ingredients. A form of *Elixir Salutis.* It is a warm, cordial purgative. Cases to which adapted. Dose, f℥ij to ℥ss.

Confectio Sennæ, U. S.; *Confection of Senna. Lenitive Electuary.*—Ingredients. Used in costiveness. Dose, f℥j to ij.

Extractum Sennæ Fluidum, U. S.; *Fluid Extract of Senna.* Ingredients. Mode of preparation. Advantages. Dose, f℥i to f℥ss.

CASSIA MARILANDICA, *U. S.*

American Senna.

The leaflets of the *Cassia Marilandica.* An indigenous plant. Description of it.

Size, form, color, odor, and taste of the leaflets.

It has the same medical properties as the exotic drug, and may be employed instead of it in somewhat larger doses.

JUGLANS.

Butternut.

The inner bark of the root of *Juglans cinerea*, or *White Walnut.* An indigenous plant.

Description of the tree.

Properties of the bark. Appearance; color; change by exposure; odor; taste.

Saccharine character of the sap.

From the bark a *decoction* is sometimes prepared; but the extract is usually employed; a saccharine extract is made from the sap.

Extractum Juglandis, U. S.; *Extract of Butternut.*—Mode of preparing. Color; consistence; odor; taste. A thorough, but gentle cathartic; used alone or in combination. Dose, grs. x to xx, or more.

ALOE, *U. S.*

Aloes.

The inspissated juice of the leaves of *Aloe Spicata*, *Aloe Socotrina*, *Aloe vulgaris*, and other species.

Description of these plants.

Modes of obtaining aloes. Varieties, *Socotrine*, *Cape*, *Barbadoes*, and *Hepatic Aloes.*

Socotrine.—From the *Aloe Socotrina.* Locality.

Properties; consistence; color; effect of age on color; fracture; transparency of edges; odor; taste; powder; quality; manner of packing it.

Cape Aloes.—From the Aloe Spicata. Locality. Called *Shining Aloes.*

Properties. Appearance; fracture; odor; taste; powder; quality.

Barbadoes Aloes.—From Aloe vulgaris. Locality.

Properties. Form; color; odor; taste; powder; quality.

Hepatic Aloes.—Source; reason for the name.

Properties. Odor; taste; powder; quality; the inferior qualities called *Caballine Aloes.*

Relation of Aloes to water and alcohol.

Constituents. *Aloesin*, *Aloe Resin.*

Medical Properties.—A warm, stimulating purgative, having a direction to the lower portion of the alimentary canal. Character of stools. Length of time required for its operation. Absorbed. Effects of small doses roborant to stomach, and stimulating to the liver. Objection to the continued use of this drug. Drastic action in large doses. Impression on pelvic viscera. Cases to which adapted. Dose, grs. x to xx. Combinations.

Tinctura Aloes, U. S.; *Tincture of Aloes.*—Ingredients, and mode of preparing. Dose, f℥j to ℥ss. Employment.

Tinctura Aloes et Myrrhæ, U. S.; *Tincture of Aloes and Myrrh. Elixir Proprietatis.*—Use as an emmenagogue. Dose, f℥j to ℥ss.

Vinum Aloes, U. S.; *Wine of Aloes.*—Ingredients. Used in dyspepsia. Dose, same as of Tinctures.

Pilulæ Aloes et Assafœtidæ, U. S.; *Pills of Aloes and Assafetida.*—Adapted to nervous cases with costiveness. Dose, grs. x to xx.

Pilulæ Aloes et Myrrhæ, U. S.; *Pills of Aloes and Myrrh.*—In chlorosis. Dose, grs. x to xx.

JALAPA, *U. S.*

Jalap.

The root of the *Ipomœa Jalapa.* A native of Mexico.

Description of plant. Historical sketch.

Properties of the root; form, color, and external aspect; internal structure, and color; consistence; fracture; odor; taste. Mode of preparing. Powder. Effects of age.

Adulteration.

Contains *resin*, starch, gum, &c.

Relations to water and alcohol.

Resina Jalapæ.—Mode of procuring. Form; color; fracture; odor; taste; effect of heating it; solubility in alcohol; insolubility in ether. *Jalapine.*

Medical Properties.—A certain and powerful cathartic.

Character of stools. Employment. Dose, grs. x to xx.

Combinations.

Extractum Jalapæ, U. S.; *Extract of Jalap.*—Mode of preparing.

Constituents. Dose, grs. x to xv.

Tinctura Jalapæ, U. S.; *Tincture of Jalap.*—An alcoholic solution of the resin; a harsh cathartic alone, but may be used in combination. Dose, f℥j to ij.

Pulvis Jalapæ Composita, U. S.; *Compound powder of Jalap.*—Ingredients. Used for continued purging. Dose, ℥ss to j.

PODOPHYLLUM, *U. S.*

Mayapple.

The rhizoma of the *Podophyllum peltatum.* An indigenous plant.

Description of the plant. Localities. Time of flowering, &c.

Properties of the root. Form; size; color; fracture; odor; taste; powder.

Contains a peculiar principle, *Podophyllin.*

Medical Properties.—An active hydragogue cathartic, resembling jalap. Dose, grs. x to xv. Combinations.

Extractum Podophylli, U. S.; *Extract of Mayapple.*—The mode of preparation same as that of Ext. Jalapæ. Dose, grs. v to x.

SCAMMONIUM, *U. S.*

Scammony.

The concrete juice of the root of *Convolvulus Scammonia.*

A native of Asia Minor.

Description of the plant.

Mode of procuring and preparing the juice.

The purest kind called *Virgin scammony.*

Properties of *Virgin scammony.* Form; external covering; friability; appearance of fractured surface; color; effect of moistening; odor; taste; reaction with an acid.

Other qualities manufactured; mode of preparing them; ingredients employed; varieties designated by the existence of chalk, or starch in them, as *Calcareous*, *Amylaceous*, *Calcareo-Amylaceous.*

Form; color; physical and chemical characters of these varieties. The place from which they come is Smyrna. Also still more adulterated articles noticed. Best kind of scammony formerly called Aleppo; but this designation is not applied to it at present.

The constituents of good scammony are gum and *resin.*

In the virgin, the resin amounts to 70 or 80 per cent., but less in the adulterated.

Factitious Scammony, from the *Cynanchum Monspeliacum.*

Characteristics.

Medical Properties.—A powerful drastic cathartic, usually given in combination. Dose, grs. (x to xx.)

Administration in pill or emulsion. Employment.

Colocynth-

Will cleave with water, melon by [illegible] some gelatinous on the flowers of the melon —

Quickens the peristaltic movements in small ones

Compositae Fruit, Colocynth
Aloes Pulv.
Scammony
Senna
Cardamom
Colocynth Ext. (B)

Symptoms.

COLOCYNTHIS, *U.S.*

Colocynth.

The fruit of the *Citrullus Colocynthis*. A native of Syria, India, and Northern Africa.

Description of the plant.

Fruit. Form; color; structure; portion employed; odor; taste. Seeds.

Constituents, a peculiar principle, *colocynthin*, resin, and extractive.

Medical Properties.—In moderate doses, laxative; in larger doses, a drastic cathartic, even acting deleteriously. Dose of powder, grs. v to x; but rarely given in this form. Advantages of combination.

Extractum Colocynthidis Compositum, U.S.; *Compound Extract of Colocynth.*—Ingredients, and mode of preparation.

Properties. One of the most useful of purgative preparations. Combination with mercurials and narcotic extracts.

Dose, grs. v to xv. Cases to which applicable. Enters into the *Compound Cathartic Pills.*

GAMBOGIA. *U.S.*

Gamboge.

The concrete juice of an uncertain tree. Probably a species of *Garcinia*, or *Hebradendron.*

Description of *Hebradendron Cambogioides.* A native of Ceylon.

The officinal Gamboge comes from Siam.

Pipe Gamboge.—Form; mode of collection; external appearance and color; fracture; effect of moistening; odor; taste. Powder.

Gamboge in sorts.—Form; appearance; quality.

Relation to water and alcohol.

Constituents.—Gum and resin.

Medical Properties.—A powerful drastic hydragogue cathartic, sometimes acting with violence. Dose, grs. ij to iv, in pill. Generally given in combination. Cases to which adapted.

PILULÆ CATHARTICÆ COMPOSITÆ, U.S.; *Compound Cathartic Pills.*—Ingredients. Cases to which suited. Dose, 2 to 4 pills.

ELATERIUM, *U. S.*

Elaterium.

A substance deposited by the juice of the fruit of the *Momordica Elaterium.*

Description of the plant. A native of the South of Europe. Cultivated in England. Called wild, or squirting cucumber.

Clutterbuck's Elaterium.—Mode of procuring it. Proportion obtained. Activity.

Commercial of two kinds—*White* and *Black.*

White Elaterium.—Mode of procuring; form; appearance; color; fracture; odor; taste; relation to water and alcohol.

Black Elaterium.—Mode of preparing; form; color; quality.

Constituent of Elaterium, a peculiar principle, *Elaterin.*

Medical Properties.—An energetic hydragogue cathartic. Irritating in large quantity. Employment. Dose, gr. $\frac{1}{8}$—$\frac{1}{6}$—$\frac{1}{4}$.

Effects of over-doses. Dose of elaterin, gr. $\frac{1}{12}$—$\frac{1}{8}$. Caution in the use of Elaterium.

OLEUM TIGLII, *U. S.*

Croton Oil.

The oil of the seeds of the *Croton Tiglium.* A native of India.

Description of plant. Seeds. Mode of obtaining the oil.

Properties of the oil. Consistence; color; odor; taste.

Adulteration.

Contains a principle called *Tiglin.*

Medical Properties.—A powerful hydragogue; in moderate doses, acting with ease; in too great a dose, acting on stomach, and inordinately purging. Dose, gtt. j to ij. Mode of administration. Advantages. Cases to which applicable.

Irritant properties when applied to the skin. Purpose of application.

HELLEBORUS NIGER, *U. S.*

Black Hellebore.

The root of the *Helleborus Niger*, a plant growing in the mountainous regions of Europe.

Description of plant.

Properties of the root; form; color; fracture; odor; taste. Difference between it and the root of *Actæa spicata*.

Constituents, volatile oil, and resinous extractive. *Helleborin.*

Medical Properties.—Harsh drastic cathartic. Danger of overdoses. Employment. Determination to the pelvic viscera. Dose, grs. x; or in smaller doses as a nervous stimulant and diuretic.

Extractum Hellebori, U. S.; *Extract of Black Hellebore.*—Mode of preparation. Dose, grs. iij to v.

Tinctura Hellebori, U. S.; *Tincture of Black Hellebore.*—Uses. Dose, gtt. x to f℥j.

MINERAL CATHARTICS.

SULPHUR, *U. S.*

Sulphur.

Chemical nature; source. When purified, called *Brimstone.*

The officinal article, designated as *Sulphur*, is the *Sublimed Sulphur*, *Flowers of Sulphur.*

Sulphur Lotum, U. S.; *Washed Sulphur.*—Properties; form; color; odor; taste. Effects of heat. Insolubility in water and alcohol, but soluble in some volatile and fixed oils.

Sulphur Præcipitatum, U. S.; *Precipitated Sulphur. Lac Sulphuris.*—Mode of preparation. Characteristics.

Medical Properties.—Laxative; mode of action and of absorption. Effects upon the secretions. Employed as a cathartic; in skin and other affections, as an alterative. Dose, ℥j to ij.

Mode of administration. Less quantity given as an alterative; and repeated.

External application.

Unguentum Sulphuris, U.S.; *Sulphur Ointment.*—Preparation. Employment.

Employment by fumigation.

Remarks on *Sulphur Waters.*

MAGNESIÆ CARBONAS, *U.S.*

Carbonate of Magnesia.

Mode of obtaining it. Rationale.

Form; color; weight; feel; taste. Solubility in acids. Impurities.

Medical Properties.—Laxative and antacid. Cases to which applicable. Combinations. Dose, ʒj to ij.

MAGNESIA, *U.S.*

Magnesia.

Improperly *Magnesia Usta.* Mode of preparing. Rationale.

Form; color; odor; taste. Solubility in water. Chemical nature.

Heavy Magnesia.—Difference between it and ordinary calcined.

Medical Properties.—Laxative and antacid; can be made decidedly purgative. Liable to accumulation; remedy. Cases to which applicable. Dose, ʒj.

Combinations.

Trochisci Magnesiæ, U.S.—Mode of preparing. Uses.

LIQUOR MAGNESIÆ CITRATIS, *U.S.*

Solution of Citrate of Magnesia.

Mode of preparation. Color and taste of the solution. Efficiency as a cathartic. Advantages in the cases of children. Dose, fʒij—iv—viij.

MAGNESIÆ SULPHAS, *U. S.*

Sulphate of Magnesia.

Epsom Salts. Why so called.

Mode of procuring it from sea water.

Form, color, and appearance of the crystals. Effects of exposure; taste; solubility.

Chemical nature.

Medical Properties.—An efficient, mild, hydragogue cathartic, adapted to febrile complaints. Dose, ℥j.

Mode of administration. Combinations.

SODÆ SULPHAS, *U. S.*

Sulphate of Soda.

Glauber Salts. Found deposited on the bottoms of certain lakes; also prepared artificially.

Mode of preparation. Rationale. Chemical nature.

Form; transparency; effects of exposure; taste; solubility.

Medical Properties.—An active saline cathartic. Character of the stools. Dose, ℥ss to j.

SODÆ PHOSPHAS, *U. S.*

Phosphate of Soda.

Mode of preparation. Rationale.

Form and color of the crystals. Effect of exposure. Solubility; taste.

Medical Properties.—A mild saline cathartic, sometimes preferred on account of its taste. Dose, ℥j. Mode of administration.

POTASSÆ SULPHAS, *U. S.*

Sulphate of Potassa.

Vitriolated Tartar.—Mode of obtaining it. Rationale.

Chemical nature.

Form, appearance, and color of the crystals. Hardness; solubility; taste.

Medical Properties.—A mild cathartic, but objected to on account of its insolubility. Cases in which used. Dose, ʒss to j. Use in Dover's powder.

POTASSÆ BITARTRAS.

Bitartrate of Potassa.

Cream of Tartar.—Mode of obtaining it.

Chemical nature.

Form; color; solubility; taste.

Crude forms of it.

Medical Properties.—More laxative and refrigerant than purgative. Used in febrile affections. Dose, ʒij to ʒss. Mode of administration. Combinations.

POTASSÆ TARTRAS, *U. S.*

Tartrate of Potassa.

Soluble Tartar.—Mode of preparing. Rationale.

Form; solubility; effect of exposure; taste.

Medical Properties.—Mild cathartic. More used as a diuretic. Dose, ʒss to j. May be added to the *Senna Draught.*

POTASSÆ ET SODÆ TARTRAS, *U. S.*

Tartrate of Potassa and Soda.

Rochelle Salt.—Mode of preparing. Rationale and chemical composition.

Form and shape of its crystals; color; taste; effects of heat; solubility.

Medical Properties.—Mild. Dose, ʒj.

Seidlitz Powders.—Ingredients and proportions of them. Cases to which adapted.

HYDRARGYRI CHLORIDUM MITE, *U. S.*

Calomel.

This preparation, already treated of under the head of Alteratives, is here presented as a *Cathartic.*

Mode of acting by impressing the liver, as well as promoting the secretions. Peculiarities of its action. Inconveniences, and necessity of assistance from other purgatives. Time at which best administered. Dose, grs. v to x, followed up by other cathartics. Articles most suitable for this purpose. Character of the stools.

The degree of impression not in proportion to the quantity taken. Reason for this. Danger of salivation from retention in the bowels. Danger to individuals in whom the chlorides are in excess, as seamen. Reaction of common salt with calomel. Reason for its nauseant action upon the stomach.

Employed in cases of children, and adapted to their diseases. Rarely produces salivation. More searching in its action, when employed in small repeated doses of gr. ½ to j, until grs. v or more be taken.

Cases in which given advantageously.

Full purgative dose for children, grs. ij to iv.

Calomel is an ingredient of the *Compound Cathartic Pills*.

ENEMATA.

This method of medication has already been treated of (*see* p. 16). To facilitate the action of Cathartic Medicines, or simply to open the bowels, we may employ tepid water, flaxseed tea, or an infusion of elm bark, barley water, or the

Common Enema.—Mode of preparing and using this.

If a more active impression is desirable, a solution of salts, ℥ij to Oj water. Senna tea or castor oil, added to the common injection, may be administered. Mode of treating colic by these means.

Where flatulence exists, and is the cause of distress and inconvenience, the *Oil of Turpentine* may be added to a simple solution of gummy matter: f℥ss of the oil may be given in this way, or f℥ij to iv of *Lac Assafetidæ*.

Advantages of using the *Milk of Assafetida* in the cases of children; the dose proportioned to the age.

DIURETICS.

These are medicines which occasion increased action of the kidneys, and promote the urinary secretion.

The function of the kidneys influenced by the condition of the system generally, and by the state of derangement in other organs. Hence, the idea that no such class exists. Diuretic operation admitted to depend upon an impression made upon the general system and the organs. Explanation of this view by reference to the state of the circulatory system, whether depressed or elevated. Remedies affecting the circulatory system will prove diuretic by augmenting or lowering its force.

The state of the stomach will influence diuresis, and remedies which are directed to it may also indirectly influence the kidneys. These are *indirect means.*

But there are also *direct means*, and they are substances which enter the *circulation*, and act upon the kidneys.

The evidence of a special action upon the kidneys deduced from the preference of operation upon these organs and their detection in the urine. Instances of this. Their action also may be inordinate and productive of lesion.

Relation of the kidneys to the skin. Proof of this relation. Practical application of this fact in promoting the action of diuretics.

Antagonism of the bowels, and the necessity of avoiding direct purgatives during the operation of a diuretic.

But diaphoretics and purgatives are capable of assisting in the action of diuretics, by preparing the bloodvessels and system for their introduction by absorption.

Necessity of articles of this class being in solution.

Relation of the specific gravity of the solution to the specific gravity of the liquor sanguinis. Explanation upon this ground of the fact that the same article is purgative and diuretic.

Administration of drinks. Temperature of them. Water necessary for diuresis.

The *indications* for their use are:—

1. *To promote and keep up the action of the kidneys.*—Importance in febrile and inflammatory complaints. Depurative effects in such complaints; and the evils from retained effete matters.

2. *As depletory and revulsive remedies.*—Some advantage derived from this in affections of excitement. Cases.

3. *To evacuate fluid.*—The indication in dropsies. Liability to uncertainty. Reasons for this, and mode of obviating it.

4. *To soothe and diminish irritation of the urino-genital organs.*—Cases where this is expedient.

5. *To act locally by stimulation on the mucous surfaces of the urino-genital organs.*—Cases in point.

6. *To alter or modify the nature of the urinary secretion.*—Employment under this head. Here designated as *Lithontriptics.*

SCILLA, *U. S.*

Squill.

The bulb of the *Scilla maritima.*

Description of the plant. A native of the shores of the Mediterranean, Spain, Italy, Sicily, and the Levant.

Form, size, structure, odor, and taste of the fresh bulb; varieties; preparation for market; parts rejected; amount of water, and effects of drying.

White Squill.—Form of pieces; color; size; texture; fracture; taste; effect of exposure. Powder.

Red Squill.—Color and difference. Powder.

Relation to water, alcohol, vinegar.

Constituents, volatile matter, and *scillitin.*

Medical Properties.—Squill has been mentioned as a harsh emetic. Poisonous effects. It has stimulating diuretic properties. Cases to which adapted, and the condition of the system required.

Importance of commencing with small doses, as gr. $\frac{1}{2}$, three or four times daily. Generally given in combination. Reason for this. Articles with which combined. Administration.

Acetum Scillæ; *Vinegar of Squill.*—Mode of preparation. Dose, gtt. xx to xxx.

Tinctura Scillæ, U.S.; *Tincture of Squills.*—Mode of preparation. Dose, gtt. x to xxx.

COLCHICI RADIX, *U.S.*

Colchicum Root.

The cormus of *Colchicum Autumnale.*

COLCHICI SEMEN.

Colchicum Seeds.

The seeds of the *Colchicum autumnale.*

Meadow Saffron.—A native of England, and the Continent of Europe.

Description of the plant, and its peculiar physiology.

Time at which the root is collected.

Form; structure; color; external appearance; *process-like formation;* odor and taste of the fresh root; manner of preparing it for the market; causes of inequality as a medicine.

Shape, structure, fracture, odor, and taste of the *Commercial Colchicum Root.*

Form, color, size, structure, odor, and taste of the *seeds.*

Both root and seeds contain a peculiar principle—*Colchicina.* A large quantity of starch in the root.

Medical Properties.—The properties investigated in modern times. Effects upon the kidneys; upon the skin; nervous system and bowels. Inordinate impression. Cases of dropsy to which applicable. Condition of the system necessary for its beneficial impression in gout and rheumatism. Evil effects of mal-administration. Mode of operation.

Dose in substance, gr. j to iij, made into pill.

Acetum Colchici, U.S.; *Vinegar of Colchicum.*—Mode of preparing. Dose, gtt. xx.

Vinum Colchici Radicis, U.S.; *Wine of Colchicum Root.*—

Mode of preparation. Strength. Necessity of filtering and separating the sediment. Dose, gtt. x to xx.

Vinum Colchici Seminis, U.S.; *Wine of Colchicum Seeds.*—Mode of preparing. Dose, gtt. x to f3j.

Tinctura Colchici Seminis, U.S.; *Tincture of Colchicum Seeds.*—Mode of preparing. Dose, gtt. x to f3j.

Extractum Colchici Aceticum, U.S.; *Acetic Extract of Colchicum.*—Made from the root. Mode of preparing. Dose, gr. j to ij, repeated three or four times a day.

Remarks on the combination of narcotic and purgative medicines with colchicum. The magnesia, or *Scudamore's Mixture.*

DIGITALIS, *U.S.*

Foxglove.

Before spoken of as a nervous sedative; now to be considered as a *Diuretic;* peculiarity of its action. Mode of operating. Peculiar cases to which adapted. Administration and precautions as before specified.

Remarks on the Terebinthinates.

TEREBINTHINA, *U.S.*

Turpentine.

The juice of *Pinus palustris*, and other species of pines, more especially inhabiting the southern States.

Description of plants.

Mode of obtaining turpentine.

Sometimes called *White Turpentine.* Localities from which obtained; consistence; color when fresh; change from exposure; odor; taste; effect of heat upon it.

Constituents, resin and volatile oil. Proportion of oil.

Relation to water and alcohol.

TEREBINTHINA CANADENSIS, *U.S.*

Canada Turpentine.

The juice of the *Abies Balsamea.* A native of the colder regions of the United States and Canada.

Description of the tree. Mode of obtaining the turpentine. Called *Canada Balsam. Balsam of Fir.*

Consistence when first collected; color; transparency; odor; taste; effect of age and exposure; proportion of volatile oil; inflammability.

Oleum Terebinthinæ, U. S.; *Oil of Turpentine.*—The mode of obtaining this principle from white turpentine, and its properties and chemical nature, have been presented under the head of Arterial Stimulants; it is here to be considered as a *Diuretic.* It is the efficient principle in the turpentines which have been noticed.

Medical Properties.—The turpentines are stimulating diuretics. Odor communicated to the urine. Cases of disease in which they are serviceable. Effects of too free exhibition. The dose of white turpentine, grs. x to xxx, in pill, repeated; of the Canada balsam, grs. x to xx, in pill or emulsion; of the oil, gtt. x to xx, three or four times in the day.

PIX LIQUIDA, *U. S.*

Tar.

The impure turpentine procured by burning from the wood of *Pinus palustris* and other species of pinus.

Mode of obtaining tar. Sources same as of turpentine.

Properties; consistence; color; odor; taste; solubility in water.

A very compound substance; among the constituents, are pyrogenous resins and oils, acetic acid, creasote.

By long boiling the more fluid parts escape, and there remains *Pitch—Pix nigra.*

Medical Properties.—Like the turpentines, a stimulating diuretic, but acts also as an expectorant. It is used as an external stimulating application in skin affections. Cases in which used; tar itself seldom given. Dose, f℥ss to f℥j, made into pills. The water in which it has been digested, called *Aqua Picis Liquidæ, Tar water*, most employed. Mode of preparing it. Principles on which the virtues depend. Dose, f℥ij, repeated. A pint may be taken daily.

Unguentum Picis Liquidæ, U. S.; *Tar Ointment.*—Mode of preparing. Cases to which applicable.

Creasotum, U. S.; *Creasote.*—Mode of preparing.

Properties; consistence; color; odor; taste; effect of age; sp. gr. 1.837. High boiling, and low freezing point; volatility; inflammability; solubility in water and alcohol; origin of name.

Medical Properties.—A stimulant and coagulant in the pure state; diluted, it enters the circulation, acting on the kidneys; but most used as a hæmostatic agent; effect on albumen. Also used as a detergent and antiseptic in foul and gangrenous ulcers; other applications. Dose, gtt. j to ij, properly diluted, or in pill.

Creasote Water.—Strength. Use as a lotion.

Unguentum Creasoti, U. S.; *Ointment of Creasote.*—Preparation. Uses.

Resina, U. S.; *Resin.*—The residuum after the distillation of the volatile oil from white turpentine. In common language *Rosin.*

Properties; solubility; color; fracture; odor; taste; effect of heat; product of burning; solubility in alcohol; effect of the alkalies in rendering it soluble in water. Chemical constitution. Union with oils.

By melting and incorporating water, *Resin* becomes *White Resin.*

Employment of *Resin* to form ointments and plasters.

Ceratum Resinæ, U. S. *Resin Cerate, Basilicon Ointment.*—Mode of preparation. Uses.

Emplastrum Resinæ, U. S.; *Resin Plaster, Adhesive Plaster.*—Mode of preparation and uses.

COPAIBA, *U. S.*

Copaiba.

The juice of *Copaifera officinalis* and other species of *Copaifera.* Natives of Brazil.

Mode of obtaining the juice. Improperly called *Balsam* of *Copaiba.* Reason.

Properties; consistence; color; odor; taste. Effects of age upon it. Relation to water and alcohol.

Action of alkaline substances upon it.

Adulterations.

Constituents, acid resin called *Copaivic acid*, *Volatile oil.*

Medical Properties.—A stimulating diuretic, giving to the urine a peculiar odor; acting also on the mucous membranes; generally employed in affections of kidneys, bladder, and urethra. Also in those of alimentary canal or lungs. Effects on the skin. Dose, gtt. x to xxx, three times daily. Given in emulsion—caution in preparing it; or in Capsules.

Oleum Copaibæ, U. S.; *Oil of Copaiba.*—Mode of procuring it; properties; chemical nature; employment; mode of administration. Dose, gtt. v to x.

Pilulæ Copaibæ, U. S.; *Copaiba Pills.*—Mode of preparation. Chemical nature. Advantages of the magnesia. Combining proportion. Dose, grs. x to xx.

JUNIPERUS, *U. S.*

Juniper Berries.

The fruit of the *Juniperus communis.* A native of Europe, but abundant in this country.

Description of plant.

Properties of berries; size; color; odor; taste; relation to water and alcohol.

Medical constituent, volatile oil.

Medical Properties.—Stimulating diuretic. Adapted to cases free from excitement. Usually directed in combination. Articles with which combined. The form of administration, infusion. Mode of preparing it. Dose, f℥ij to iv. One pint may be taken in 24 hours.

Oleum Juniperi, U. S.; *Oil of Juniper.*—Mode of obtaining it. Consistence; color; odor; taste; effects of age; chemical character. Dose, gtt. v to x. Administration.

Spiritus Juniperi Compositus, U. S.; *Compound Spirit of Juniper.*—Ingredients. Cordial, stimulating, and diuretic. Dose, f℥j.

Remedial effect of Hollands.

TARAXACUM, *U. S.*

Dandelion.

The root of the *Leontodon taraxacum.* Native of Europe and this country.

Copaiba

Is a stimulating [illegible] to the
stomach - acts on the [illegible]
In the [illegible]
increases [illegible] - [illegible]
[illegible]

Description of plant.

Properties of the root; size; color; formation; fracture; odor; taste. Preference given to the fresh root.

Constituents, bitter extractive, sugar, gum.

Medical Properties.—Diuretic, laxative, and acting on the liver. Cases to which adapted.

INFUSUM TARAXACI, U. S.; *Infusion of Dandelion.*—Mode of preparing. Dose, f℥ij to iv. Combinations. Employment.

EXTRACTUM TARAXACI, U. S.; *Extract of Dandelion.*—From fresh root. Mode of preparing; appearance; consistence; odor; taste. Dose, grs. x to xx, three times daily. Administration. Combinations.

BUCHU, *U. S.*

Buchu.

The leaves of *Barosma crenata* and other species. Plants growing at Cape of Good Hope.

Description.

Leaves used. Characters. Sensible properties.

Constituents, volatile oil and extractive.

Menstrua.

Medical Properties.—Cases to which applicable.

INFUSUM BUCHU, U. S.; *Infusion of Buchu.*—Mode of preparation. Dose, f℥j to ij.

PAREIRA, *U. S.*

Pareira Brava.

Root of the *Cissampelos pareira.* A native of South America and the West Indies.

Description of the plant.

Characters of the root; inodorous; taste.

Constituents, *Cissampelina*, resin, bitter principle.

Menstrua.

Medical Properties.—Cases of irritable bladder treated with it. Given in decoction, infusion and extract.

APOCYNUM CANNABINUM, *U. S.*

Indian Hemp.

The root of the *Apocynum cannabinum*, an indigenous plant.

Description of the plant.

Properties of the root; size; structure; color; odor; taste. Contains an acrid oleo-resin.

Medical Properties.—An active diuretic, emetic or purgative. Given in decoction made by boiling ℥ss of root in Ojss water to a pint. Dose, f℥j to ij, two or three times daily.

ERIGERON PHILADELPHICUM, *U. S.*

ERIGERON HETEROPHYLLUM, *U. S.*

Fleabane.

The herbaceous portions of these plants, which are indigenous.

Description of the plants.

Sensible properties. Relation to water.

Contains a volatile oil.

Medical effect, mildly diuretic. Cases to which applicable. Given in decoction ℥j to Oj water, drunk *ad libitum*.

CAROTA, *U. S.*

Wild Carrot.

The seeds of the *Daucus carota*, an indigenous plant. Description of it.

Properties of the seeds; form; size; color; odor; taste; relation to water. Flowering tops.

Active ingredient volatile oil.

Medical Properties.—A mild, stimulating diuretic, also somewhat cordial. Cases to which adapted. Given in infusion, ℥ss to Oj water. Dose, f℥ij to iv. Used as an adjuvant.

Root of the cultivated carrot. Esculent and medicinal properties. External employment.

PETROSELINUM, *U. S.*

Parsley Root.

The root of the *Apium petroselinum*. Cultivated.

Medical Properties.—A moderately stimulating diuretic. Given in infusion. Cases to which applicable. Adjuvants.

CANTHARIS, *U. S.*

Spanish Flies.

Cantharis vesicatoria.—For the natural history and chemical constitution, &c., of this insect, see *Epispastics.*

Medical Properties.—Diuretic. Inordinate impression from over-doses. Poisonous effect. Cases to which applicable. Caution in the administration. Reputation as an emmenagogue. Dose, gr. j, three times daily, in pill.

TINCTURA CANTHARIDIS, U. S.; *Tincture of Spanish Flies.*—Mode of preparing. Dose, gtt. v to x, repeated three times daily. Desist from exhibition when it occasions strangury. Employment.

POTASSÆ CARBONAS, *U. S.*

Carbonate of Potassa.

Modes of obtaining and preparing it for employment. Rationale.

Called *Salt of Tartar.*

Form; color; taste; effect of exposure; solubility in water; insolubility in alcohol. Action of acids. Impurities. Chemical character.

Medical Properties.—Antacid, diuretic, and antilithic.

Effect on fats in the stomach. Change produced in the urine.

Effects of long exhibition on the blood, and injurious action of too large doses. Employment. Dose, grs. x to xx, two or three times a day. Mode of administration.

POTASSÆ BICARBONAS, *U. S.*

Bicarbonate of Potassa.

Method of preparing.

Form; color of crystals; taste; solubility. Change in hot solution and from heat.

Chemical character.

Medical Properties.—Similar to the carbonate. Employment. Advantages. Dose, ʒss to ʒj. Combinations.

POTASSÆ ACETAS, *U. S.*

Acetate of Potassa.

Called *Sal Diureticus.*

Mode of preparing.

Form; color; taste; effect of exposure. Solubility.

Medical Properties.—Diuretic; change in the urine. Employment. Dose, ℈j to ʒj. Administration.

POTASSÆ BITARTRAS, *U. S.*

Bitartrate of Potassa.

Mentioned under Cathartics. More sparingly exhibited and very much diluted with water, an efficient diuretic.

Mode of administration. Combinations. Dose, ʒss in Oj of water, drank during the 24 hours.

Change produced in the urine. Cases to which adapted.

POTASSÆ NITRAS, *U. S.*

Nitrate of Potassa.

Spoken of as an arterial sedative. A decided diuretic, calculated to meet this object in cases of excitement. Dose, grs. x, every two, three, or four hours. Apt to weaken and depress, if not irritate the stomach.

SPIRITUS ÆTHERIS NITRICI, *U. S.*

Spirit of Nitric Ether.

Sometimes called *Spiritus Nitri Dulcis*, Sweet Spirits of Nitre.

Mode of preparing it. Rationale.

Composition.

Properties; limpidity; color; odor; taste; inflammability; volatility. Sp. gr. 0.834. Effect of age.

Adulteration.

Medical Properties.—Diuretic, diaphoretic, and antispasmodic. General application. Advantages in cases of children. Mode of administration. Dose, fʒss to j. Combinations.

DIAPHORETICS.

By this term are designated medicines which produce or facilitate the discharge from the skin. When moderate, this discharge is *perspiration;* when profuse, it constitutes *sweat.*

A distinction has been drawn between *Diaphoretics* and *Sudorifics.* This, however, is not necessary, as the same substance may be one or the other, the moderate or inordinate impression being dependent upon a number of contingent circumstances; the discharge is also the same, whether moderate or profuse; and further, the most opposite impressions may be productive of the same effects. The two names may be used synonymously.

The skin exhales salts and animalized matter derived from the blood. Chloride of sodium is one of the salts.

Under ordinary circumstances, the cutaneous transpiration is *insensible*, because removed by the atmosphere; if the amount be increased to such an extent that it cannot be removed, it remains upon the skin, and becomes *sensible.*

Proofs, from an experiment, that exhalation takes place.

There is another reason why perspiration becomes sensible, which is, the hygrometric condition of the atmosphere; if the air is humid and non-absorbent, the insensible perspiration will not be removed as fast as formed, and, remaining on the skin, will constitute sweat. This is an element always to be taken into consideration in determining the amount of perspiration.

From the clogged condition of the skin under a humid atmosphere, there may be an actual diminution of perspiration, while there is a greater show of it.

The amount of perspiration is modified by the vigor of the system, by the nature and quantity of the ingesta, and the temperature of the atmosphere.

Perspiration may be promoted by diminished pressure of the atmosphere, and by exercise.

Perspiration is effected by two acts; one merely physical, whereby water is exhaled; the other, secretory. The exhalation of water preserves the natural temperature of the skin; while the secretory act contributes to the removal of materials which, by retention, would prove injurious.

Explanation of the antagonism between the skin and the kidneys, and of the relation between the skin and the bowels and lungs.

Diaphoretics produce their effects in opposite ways:—

1. *By relaxing the skin.*—Illustration of this mode.

2. *By stimulating the circulation.*—Explanation of the conditions in which this is the case.

3. *By entering the circulation, and acting directly on the skin.*—Instances given where this is probably the fact. Proofs of substances reaching the skin. Many, however, which are taken up by the circulation, produce diaphoresis by acting on the general system.

4. *By producing an impression upon the stomach, which is communicated to the skin.*—Illustration.

5. *By filling the bloodvessels.*—Illustration and proof.

Diaphoretics are relative agents; and, since a number of circumstances are to be taken into consideration to produce their effects, many adventitious agents are to be employed in promoting them. Illustration of this from the time of administration; the management of covering, and the use of drinks. The indications they are capable of fulfilling are:—

1. *To promote the subsidence of disease, which usually terminates by perspiration.*—Illustration of this derived from their use in fevers, &c.

2. *To deplete.*—Extent to which this can be carried. Advantage in cases of excitement or plethora.

3. *To produce revulsion by determination to the surface.*—Illustration of relief to the internal organs from this cause. Cases to which this applies. Modes of favoring it.

4. *To promote absorption.*—Explanation of the manner in which this is effected. Advantageous in cases of dropsy.

5. *To eliminate noxious matters from the system.*—Illustration of the depurative action of the skin, and propriety of employing it; but caution against the abuse of this indication in acute diseases by forced measures.

Free natural perspiration very different from colliquative sweat sometimes met with in disease. The one to be promoted, the other checked. The measures indicated to check profuse diaphoresis.

Diaphoretics may be divided into *Nauseating*, *Refrigerant*, and *Alterative.*

NAUSEATING DIAPHORETICS.

IPECACUANHA, *U. S.*

This article has been treated of under the head of Emetics. It is seldom employed as a diaphoretic by itself, but usually in combination with opium.

Employed in the treatment of fevers and inflammations. If slight nausea be produced, this contributes to the diaphoretic action.

Advantages of combination, if the power of secreting organs be deranged, with mercurials; and, further, with opium, should pain or sleeplessness be present.

Remarks upon employment of ipecacuanha in Dysentery.

Dose, gr. ½, every two or three hours, in pill. Larger doses may be made to remain upon the stomach. Manner of securing this result.

Pulvis Ipecacuanhæ et Opii; *Dover's Powder.*—Composition. Proportion of ingredients. Use of the saline ingredient. Advantages and sources of the preference to be given to this form. Dose, grs. x, or in divided doses. Mode of administration in the several diseases to which adapted.

ANTIMONII ET POTASSÆ TARTRAS, *U. S.*

Tartrate of Antimony and Potassa.

Tartar Emetic has been considered under the head of the Antimonials. As a diaphoretic, it is used in diseases of excitement.

The diaphoretic effect connected with the sedative impression; but continues after the medicine has been discontinued, showing its decided action upon the skin. Mode of administration. Combinations.

REFRIGERANT DIAPHORETICS.

POTASSÆ CITRAS, *U. S.*

Citrate of Potassa.

Mode of preparing this salt. Reason of preference given to the *Bicarbonate of Potassa* in the formation.

Form; color; taste; solubility; effect of exposure.

Medical Properties.—Sedative and refrigerant. Applies to febrile conditions. Dose, grs. v—x—xx, given in solution. Mode of flavoring.

LIQUOR POTASSÆ CITRATIS, *U. S.*

Solution of Citrate of Potassa.

Neutral Mixture.—Mode of preparing from fresh lemon-juice. Preference given to the *Bicarconate of Potassa* in the preparation. Necessity of filtration.

Causes of flocculence when the *Carbonate of Potassa* is used. Relative proportion of *Carbonate* and *Bicarbonate of Potassa* to be used.

Mode of preparing from *Citric Acid.*

Dose, f℥ss, with same amount of water, every two hours.

A form of this is the EFFERVESCING DRAUGHT.

Mode of preparing and mixing the solution. Proportions used. Reasons of failure to effervesce, and mode of rectifying it.

Medical Application.—An agreeable refrigerant and diapho-

retic, well received and acceptable to the stomach. Uses in fevers and inflammations. Advantage of the effervescence. Combinations.

LIQUOR AMMONIÆ ACETATIS, *U. S.*

Solution of Acetate of Ammonia.

Spiritus Mindereri, Spirit of Mindererus.—Mode of preparation. Necessity of careful saturation. Color of the solution; odor; taste.

Medical Application.—Used in fevers and inflammatory cases; states of the system to which adapted.

Dose, f℥ss, every two hours. *Acetate of Morphia* may be combined with it, or *Sweet Spirits of Nitre.*

POTASSÆ NITRAS, *U. S.*

Nitrate of Potassa.

Already noticed. In small doses, has more effect upon the skin than on the kidneys. Mode of operation. Employed in inflammatory affections, in acute rheumatism, &c. Dose, grs. v, or less. *Nitrous Powders.*

SPIRITUS ÆTHERIS NITRICI, *U. S.*

Sweet Spirits of Nitre.

This has been considered under the head of Diuretics. In less dose, and by promoting determination to the skin, acts as a diaphoretic. Advantage in combination. Dose, gtt. xx to ℥ss or ℥j. Mode of administration.

ALTERATIVE DIAPHORETICS.

GUAIACI LIGNUM, *U. S.*

Guaiacum Wood.

The wood of *Guaiacum officinale.*

GUAIACI RESINA, *U. S.*

Guaiac.

The concrete juice of *Guaiacum officinale.*

Description of the tree. A native of the West Indies. The wood called *Lignum Vitæ.*

Properties. Division into sap-wood and heart-wood; color of each; consistence; weight; effect of air and nitric acid; odor; taste; effects of heating. Form in which kept in the shops. Adulteration.

Mode of obtaining the *Resin.*

Two forms in which found in shops; appearance of surface; color; fracture; effect of heat; odor; taste. Powder.

Adulterations.

Contains an acrid principle, *Guaiacine.*

Relations to water, ether, and alcohol.

Medical Properties.—Stimulating; diaphoretic and alterative. Effects of large doses on stomach and bowels. Employment in atonic diseases. Contra-indications. Dose, grs. x to xxx. Mode of administration. Advantages of combination.

Tinctura Guaiaci, U. S.; *Tincture of Guaiacum.*—Mode of preparing. Dose, f℥ss to ij. Mode of administration.

Guaiacum wood enters into the preparation of the *Compound Decoction of Sarsaparilla*, and the *Compound Syrup of Sarsaparilla.*

MEZEREUM, *U. S.*

Mezereon.

The bark of the *Daphne mezereum*, and of *Daphne gnidium.*

Description of these plants. Natives of Europe. All parts of the plant active. Berries.

Properties of the bark; form of pieces; structure; taste. Contains a peculiar principle, *Daphnin.*

Relation to water.

Medical Properties.—Stimulant, with a direction to the skin, and, if this be not promoted, acting on the kidneys. In large

doses, it acts upon the stomach and bowels. Poisonous results may arise from over-doses. Irritant effect on the skin.

Employment; cases to which adapted. Decoction made with ʒij of mezereon, and ʒss liquorice root, to Oij water boiled to Oss. Dose, fʒij to iv.

Enters into the composition of the *Compound Decoction of Sarsaparilla.*

External employment.

Unguentum Mezerei, U. S.; *Ointment of Mezereon.*—Mode of preparation. Uses.

The wood used to make *Issue Peas.*

SASSAFRAS RADICIS CORTEX, *U. S.*

Bark of Sassafras Root.

The bark of the root of *Sassafras officinale.*

Description of the tree. An inhabitant of North America.

Form of the bark; color; consistence; fracture; odor; taste. Relation to water and alcohol.

Contains a volatile oil and tannin, with extractive.

Oleum Sassafras, U. S.; *Oil of Sassafras.*—Properties.

Medical Properties.—Stimulant to the circulation, and to the secretions; determination to the skin. Effect of over-doses.

Enters into the composition of the *Compound Decoction of Sarsaparilla.*

The oil is an ingredient of the *Compound Syrup of Sarsaparilla.*

Sassafras Medulla, U. S.—Uses.

SARSAPARILLA, *U. S.*

Sarsaparilla.

The root of *Smilax officinalis* and other species.

Description of the plants. Inhabitants of Mexico and South America. Erroneous statement with respect to *Smilax Sarsaparilla.*

Several varieties. *Honduras, Jamaica, Caracas, Mexican, Brazilian.*

Honduras Sarsaparilla.—Form and construction of the bales. Division of root into head and fibres. Form of head; length of fibres; size; appearance; color; structure; odor; taste. Value of taste as a test of quality.

Jamaica or Red Sarsaparilla.—Appearance and color. Original source.

Caracas Sarsaparilla.—Appearance; value.

Mexican Sarsaparilla.—Appearance. Points of distinction and value.

Brazilian or Para Sarsaparilla.—Form of the parcel, and preparation of the root. Color; appearance; relative value.

All these varieties contain a principle called *Smilacin.*

Relation to water and alcohol. The best solvent for the active principle is diluted alcohol.

Medical Properties.—This medicine has been variously appreciated from time to time. It appears to be a stimulant to the secretions, especially those of the skin and kidneys, while it improves the digestive powers. From the change in nutrition effected by it, and the determination to the skin, it has been ranked among the alterative diaphoretics. Cases to which adapted. Administration in powder. Dose, ℈j to ʒj.

Infusum Sarsaparillæ, U. S.; *Infusion of Sarsaparilla.*—Mode of preparation. Dose, fʒij to iv.

Decoctum Sarsaparillæ Compositum, U. S.; *Compound Decoction of Sarsaparilla.*—Ingredients and mode of preparation. *Lisbon Diet Drink.* Dose, fʒij to iv.

Syrupus Sarsaparillæ Compositus, U. S.; *Compound Syrup of Sarsaparilla.*—Mode of preparation. Dose, fʒss to ij. Combination with other alteratives.

Extractum Sarsaparillæ Fluidum, U. S.; *Fluid Extract of Sarsaparilla.* Mode of preparation. Dose, fʒj to fʒij. Advantages.

ARALIA NUDICAULIS, *U. S.*

False Sarsaparilla.

The root of the *Aralia nudicaulis.*

Wild Spikenard.—Character of the plant. An inhabitant of the United States.

Form, appearance, color, odor, and taste of the root. Therapeutic application and administration.

EXPECTORANTS.

Medicines which facilitate expectoration, or the discharge of matters from the lungs, which, if retained, would give rise to difficulty of breathing and pulmonary embarrassment.

They also modify pulmonary secretions.

The secreted matters are, in a state of health, impelled by a natural operation of ascension to the trachea and larynx, whence they escape by a voluntary effort, or by coughing.

Coughing is a forced and sudden expiration. It is brought on by the presence of irritating matters or accumulation in the air-passages of the lungs.

The more fluid and non-adherent the secretions may be, the more easy is expectoration. It is suppressed when there is no secretion, and is copious when there is an abundance of secretion.

In treating the diseases of the lungs, the character of the expectoration is regarded, in order to give an idea of the nature of the disease; it aids the physical and other symptoms.

Substances the most opposite in their action may be employed with the view to their expectorant effects; and these must be chosen according to the diseased action which may be the cause of pulmonary embarrassment.

Thus, if the action be inflammatory, free secretion is prevented and anti-inflammatory and relaxing articles prove expectorant. Illustrations. In more advanced stages of inflammation, with perverted secretion, the stimulating articles are useful. Illustrations. Where there is too great secretion from atony and laxity of tissue, the stimulating and invigorating articles prove serviceable. Illustrations.

There is still another condition, which is attended with diffi-

cult expectoration; that is, debility. Where, in such cases, accumulation in the bronchial tubes cannot be removed from want of power, whatever contributes to the muscular power proves expectorant. Proof of this derived from Phthisis.

Expectoration is frequently embarrassed by the pain attendant upon the effort. Anodynes here prove serviceable.

Proof that medicinal substances reach the lungs by absorption.

Difficulty of expectoration with children. Necessity of aiding it. Advantage of an emetic impression in their pulmonary diseases.

Aid to be derived from demulcent articles.

In the treatment of pulmonary affections, the necessity of protection from clothing enjoined.

Inhalations.

The relaxing expectorants have been treated of under the head of Arterial Sedatives and Emetics. The most potent are *Tartar Emetic* and *Ipecacuanha.*

In doses of gr. $\frac{1}{12}$, $\frac{1}{8}$, $\frac{1}{4}$, repeated every two or three hours. Tartarized antimony proves expectorant in inflammatory cases by relaxing the mucous tissue of the lungs, and relieving inflammatory action. It is usually given in combination. It is constantly used as an addition to cough mixtures and ptisans. Combinations stated; also formulæ.

Ipecacuanha as a nauseant is also employed in small doses, varying from gr. $\frac{1}{4}$ to $\frac{1}{2}$—j; but usually in the form of the *Wine*, or the *Syrup*, is employed in compound preparations administered as cough mixtures. The ingredients of such mixtures stated. The Trochisci Ipecacuanhæ, U. S., are convenient in some cases. Cases to which this article is adapted.

SCILLA, *U. S.*

Squill.

Previously treated of as an Emetic and Diuretic. It seems to have also a decided value in the treatment of pulmonary affections, and is regarded as stimulating to the mucous lining of

the extreme tubes and cells, thereby unloading them of contained mucus, and restoring healthy secretion.

It is not to be used where there is excitement, and, therefore, is better adapted to the latter stages.

Diseases in which efficacious. Nausea advantageous in some cases. Absorbed.

Modified by combination, and may be given earlier.

The vinegar and tincture noticed among Diuretics.

Oxymel Scillæ, U. S.; *Oxymel of Squill.*—Mode of preparation. Dose, f℥j to ij. Employment.

Syrupus Scillæ, U. S.; *Syrup of Squill.*—Mode of preparation. Dose, f℥j to ij; less for children. Employed as an ingredient of cough mixtures.

Syrupus Scillæ Compositus, U. S.; *Compound Syrup of Squill.*—Ingredients, and mode of preparation. Advantages. Dose, f℥ss to f℥ij. Emetic effects. Diseases in which used.

Pilulæ Scillæ Compositæ, U. S.; *Compound Pills of Squill.*—Mode of preparing. Ingredients. Employment. One or two given three or four times daily.

ALLIUM, *U. S.*

Garlic.

The bulb of *Allium sativum.*

Description of plant. A native of England; here introduced.

Structure of the bulb. *Cloves of Garlic.* Odor; taste. Contains a volatile oil.

Medical Properties.—A powerful stimulant. Effect on digestion. A stimulating expectorant. Effect upon the breath. Cases to which adapted.

Rubefacient action.

Syrupus Allii, U. S.; *Syrup of Garlic.*—Mode of preparation. Dose, f℥j.

Employment of *Onions.*

SENEGA, *U. S.*

Seneka.

The root of *Polygala senega*. An inhabitant of the southern portions of the United States.

Properties; size; form; irregularity; peculiar marking; color; structure; odor; taste. Powder.

Contains a peculiar principle, *Polygalic acid.*

Medical Properties.—A stimulating expectorant; acting also upon the kidneys and bowels. In large doses nauseant and emetic. Employment in affections of the lungs, especially pneumonia. Stages of disease when appropriate. Mode of operating. Dose, grs. ~~x to xx~~. grs II or III

Decoctum Senegæ, U. S.; *Decoction of Senega.*—Mode of preparation. Dose, f℥ss to f℥ij, repeated at stated periods.

Syrupus Senegæ, U. S.; *Syrup of Senega.*—Mode of preparing. Dose, f℥j to ℥ij, or more. Use in cough mixtures.

Senega enters into the composition of the *Compound Syrup of Squill.*

AMMONIACUM, *U. S.*

Ammoniac.

The concrete juice of the *Dorema ammoniacum*, an *umbelliferous* plant found in Persia and Armenia.

In two forms, tears and sorts.

Tears.—Form; size; color; fracture; appearance of the surface.

Sorts.—Formation; appearance; varieties; odor; taste; inflammability. Powder.

Contains gum, resin, and volatile principle.

Relation to water and alcohol.

Medical Properties.—A stimulating expectorant and antispasmodic. Employment. Dose, grs. x to xx, in pill. 2 - 3 hrs

Mistura Ammoniaci, U. S.; *Ammoniac Mixture.*—Mode of preparing. Dose, f℥ss to j.

Emplastrum Ammoniaci, U. S.; *Ammoniac Plaster.*—Mode of preparing, and uses.

The *Plaster of Ammoniac and Mercury*, also prepared. Uses.

GALBANUM, U. S.—Source and employment.

BENZOINUM, *U. S.*

Benzoin.

The concrete juice of the *Styrax Benzoin*. A native of the Malaccas, Siam, and Pegu.

Description of the plant. Mode of obtaining the juice.

In two forms, tears and masses.

Tears.—Form; color; fracture; surface.

Masses.—Appearance; structure; impurities; odor; taste.

Contains *Resin*, volatile oil, *Benzoic Acid.*

Relation to water and alcohol.

Benzoic Acid.—Form; appearance; odor; taste; solubility; reaction with bases.

Mode of preparation.

Medical Properties.—Stimulating, with a decided action upon the lungs. Employment. Dose, grs. x, in pill, or emulsion.

TINCTURA BENZOINI COMPOSITA, U. S.; *Compound Tincture of Benzoin.*—Ingredients and mode of preparation.

Employment as an expectorant. Dose, f℥ss to j, diluted. Use as a *vulnerary.*

Benzoic acid enters into *Camphorated Tincture of Opium.*

BALSAMUM PERUVIANUM, *U. S.*

Balsam of Peru.

Obtained from *Myrospermum peruiferum.*

Description of the tree. An inhabitant of South America, found in Peru and New Grenada.

Mode of obtaining the balsam. Varieties.

Properties; consistence; color; odor; taste.

Contains resinous principle, *Benzoic acid*, volatile oil, &c.

Medical Properties.—Stimulant. Cases to which adapted. Dose, ℥ss, in emulsion. Local employment.

Galbanum

Benzoin

BALSAMUM TOLUTANUM, *U. S.*

Balsam of Tolu.

The juice of *Myrospermum Toluiferum.*

Description of tree. An inhabitant of Colombia.

Mode of obtaining the juice.

Properties. Consistence; effect of age; color; odor; taste. Effect of heat.

Relation to water and alcohol. Solubility in alkaline solutions.

Contains cinnamic acid, bezonic acid, and volatile oil.

Medical Properties.—A stimulating expectorant. Cases to which adapted. Dose, grs. x to xxx.

TINCTURA TOLUTANA, U. S.; *Tincture of Tolu.*—Mode of preparation. Uses. Dose, f℥ss to j.

SYRUPUS TOLUTANUS, U. S.; *Syrup of Tolu.*—Mode of preparation. Employment in cough mixtures. Dose, f℥j to f℥ss.

EMMENAGOGUES.

This class of medicines may be defined to be substances which promote the functional action of the uterus, and which provoke and maintain the periodical occurrence of the menstrual secretion.

As the non-appearance or stoppage of this flux may depend upon different causes, no medicines specific or applicable to every case. The treatment must be governed by general principles. Illustrations from cases of a plethoric character and of an anæmic character.

Must be considered as secondary agents, fulfilling certain purposes necessary to the menstrual function.

Three things necessary: A sound condition of the organ; a sufficient amount of blood in the system to meet the demand; and periodic excitement.

Reference to the importance of the menstrual function, and its connection with health.

Rules for the administration of Emmenagogues, and reasons for preferring one to another in certain cases.

FERRI PRÆPARATA.

Preparations of Iron.

Remarks on their mode of operating. Cases to which adapted. Concomitant course to be pursued. Contra-indications. Advantages of combination with purgatives; with nervous stimulants.

The particular preparations have been presented.

ALOES, *U. S.*

Aloes.

Mode of operation dependent on its purgative action, and determination to the pelvic viscera; stimulating to uterus. Cases to which adapted. Administration. Dose, grs. ij, two or three times daily.

PILULÆ ALOES, U. S.; *Aloetic Pills.*—Preparation. Dose, one or two pills thrice daily.

PILULÆ ALOES ET MYRRHÆ, U. S.; *Pills of Aloes and Myrrh.*—Advantages of the combination. Dose, three to six pills, or two at a time, repeated.

Combination with iron.

HELLEBORUS NIGER, *U. S.*

Black Hellebore.

A stimulant to the uterus, without inducing a purgative impression. Used in atonic conditions. Contra-indications. *Tincture* used. Dose, f℥ss to j, repeated two or three times daily. Mode of administration.

SENEGA, *U. S.*

Seneka.

This has been mentioned under the head of Expectorants. Effect upon the uterus. Cases to which adapted. Value. Mode of administration in powder—dose, grs. v, three times daily; or in decoction.

GUAIACI RESINA, *U. S.*

Guaiac.

Heretofore considered under the head of Diaphoretics. A general stimulant, with a direction to the emunctories. Action on the uterus. Adapted to cold phlegmatic constitutions, and where there is a rheumatic tendency. Advantage of combining with ammonia.

Tinctura Guaiaci Ammoniata, U. S.—Mode of preparation. Employment. Dose, f3j to ij.

Necessity of free dilution.

SABINA, *U. S.*

Savin.

The tops of *Juniperus sabina*. A native of Europe. Introduced.

Description of plant.

Properties of the leaves. Powder.

Contains a volatile oil.

Oleum Sabinæ, U. S.; *Oil of Savin.*—Characters.

Medical Properties.—A powerful stimulant. Effect of inordinate use. Effect on kidneys. Cases to which adapted. Contra-indications. Dose, grs. v to x in powder. Dose of the oil, gtt. v to x. Criminal use to which this is sometimes put.

CANTHARIS, *U. S.*

Spanish Flies.

Mode of operation as an emmenagogue. Effect upon the bladder. Cases in which used. Contra-indications. Dose, of *Tincture*, gtt. x to xx.

Other Emmenagogues, as *Madder* and *Rue*.

SIALAGOGUES.

SUBSTANCES which produce salivary discharge are designated by this term. The effects of mercury upon the salivary glands, which have been already considered, are not, in the present connection, to be considered as pertaining to the class, as these effects depend upon constitutional impression.

Sialagogues act by a local impression, and are productive of beneficial effects, from free secretion or by revulsion. Cases in which advantage is derived from them. Those ordinarily employed are *Mezereon* and *Tobacco*, which have been presented; or

PYRETHRUM, *U. S.*

Pellitory.

The root of the *Anacylus pyrethrum.*

A native of Europe.

Description of the plant.

Form, color, fracture, odor, and taste of the root.

Contains a volatile oil.

Medical Properties.—Effect upon the gums and mouth. Employment, and cases in which beneficial.

ERRHINES.

Medicines employed to make an impression upon the mucous membrane of the nose.

They are used to promote secretion; to relieve the organ of suppression of discharge; or to produce revulsive effects. They may also be used for a local alterative effect.

Suppression of secretions, dependent upon irritation, relieved by mild applications, as the vapor of water. Cases in which a revulsive effect is beneficial. Articles employed, and necessity of diluting those which are acrid.

When an impression is to be made upon the mucous membrane, or parts connected with it, a relation should be preserved between the state of irritation and the sensibility of the part and the force of the article used. Cases in which this treatment is required, and mode of effecting it. When sneezing is produced, they are called *Sternutatories*.

EPISPASTICS.

Substances which, by their action upon the skin, produce a blister. Sometimes the terms *Blisters* and *Vesicatories* are used to designate them.

Their impression is local, producing inflammation, terminating in effusion, which separates the cuticle.

Variation of effect depending upon several circumstances. These specified.

Difference of result depending upon the intensity of the inflammation, from mere vesication to sloughing.

Mode of producing vesication.

Effect local at first, but may become general. Explanation.

Indications for their use.

1. *As an evacuant.*—Degree to which this may be carried. Effect in relieving inflammation or congestion. Character of fluids which are discharged. Effect of such discharges, when profuse, necessarily debilitating.

2. *As derivatives.*—Revulsion and its agency. Explanation of the good and bad effect of their use with this design. Not applicable to the relief of every kind of local excitement, as certain kinds of specific inflammation are not relieved by them. Illustrations. Effect regulated by the seat of the inflammation, and its stages. In early stages, danger from the excitement producing reaction on the inflamed organ. Course to be pursued under these circumstances. Explanation of what is meant by the "*Blistering Point.*" Symptoms which determine it stated. Effect of blisters on the skin and lungs. Considerations with respect to extent of surface to which applied. Necessity of a right choice of position in applying them. Illustrations. A determinate impression required for this indication.

3. *To substitute their action for that of disease.*—Cases where this is beneficial.

4. *As general stimulants.*—Their excitant action taken advantage of in diseases of prostration. Illustrations. Mode of employment in such cases. Danger of sloughing when reaction is established. *Flying Blisters.*

5. *As local stimulants.*—Cases where the impression is salutary by arousing the vital actions in indolent conditions of parts. Cases illustrative of this. Preparation for discutients; for endermic applications.

6. *With the view to an antispasmodic action—to promote rest and allay pain.*—Cases cited.

Inordinate susceptibility to their action, and disastrous consequences in such cases. Necessity of caution in the cases of children.

Length of time a vesicatory should be left on the skin.

Mode of treating painful and irritable blisters.

CANTHARIS, *U. S.*

Spanish Flies.

Cantharis vesicatoria.

Description of the insect. A native of Spain and Italy. Mode of collecting and preserving it.

Powder. Appearance; color; odor; taste.

Adulterations. Depredations of an insect upon *Cantharides.*

Contain a volatile oil and *cantharidin.*

CANTHARIDIN. Form; color; volatility. Solubility in fatty matters. Relation to water and alcohol.

Medical Properties.—Employed to vesicate, or for the purpose of local stimulation.

CERATUM CANTHARIDIS, U. S.; *Cerate of Spanish Flies.*—Ingredients, and mode of preparation. Mode of spreading a blister. After-treatment.

UNGUENTUM CANTHARIDIS, U. S.; *Ointment of Spanish Flies.*—Mode of preparation. Employment as a stimulating dressing to blisters, or to produce vesication on delicate skins.

LINIMENTUM CANTHARIDIS, U. S.; *Liniment of Spanish Flies.*

—Made with *Oil of Turpentine.* Mode of preparation. Use as a stimulating liniment, to moisten blisters, and to prepare the skin for their application.

CANTHARIS VITTATA, *U. S.*

Potato Flies.

Cantharis Vittata.
Description of the insect. A native of the United States.
Properties. Employment as a substitute for Spanish Flies.

Other species of *Cantharis.*

Vesicating Taffetas.

RUBEFACIENTS.

Articles which redden the skin in consequence of the irritation and inflammation they produce are termed Rubefacients. Action upon the capillaries, and fluxionary movement produced by them. Impression on the sensibility of the part to which applied. The impression is either *revulsive*, or stimulating to the entire system.

Employed to make a rapid and potent impression. Successful in proportion to the lightness of the grade of irritation or inflammation they are intended to remove. Advantage of using them in early stages of inflammation, aided by other remedies. Illustration.

Where inflammation is seated, they must give place to blisters.

Advantage of their employment in painful affections. Use as stimulants. Cases to which adapted. In employing them, must be guided by the condition of the circulation and skin.

Extent of surface to be covered by them, and the importance of selecting the right position.

Time of maintaining their impression, and untoward results from their inordinate use.

SINAPIS, *U. S.*

Mustard.

The seeds of *Sinapis nigra* and *Sinapis alba*. Probably natives of Asia, but cultivated in Europe and this country.

Description of the plants.

Black Mustard Seeds.—Size; form; color externally and internally. Powder; color; odor; taste.

White Mustard Seeds.—Size; color. Powder, difference between it and the preceding.

Mustard flour. Liable to be adulterated.

Mustard contains fecula, fixed oil, and a peculiar principle, *Sulpho-sinapin.*

Reaction which this principle undergoes with water and emulsion.

Volatile Oil. Odor; taste.

Medical Properties.—Entire seeds used as a laxative. Employment of the flour as a rubefacient. Cases to which applicable. Necessity of mixing with warm water. Different modes of application.

CAPSICUM, *U. S.*

Cayenne Pepper.

In its rubefacient power, equal, and similar to mustard. Modes of application as a plaster, or in the form of tincture as a liniment. Advantage of adding it to stimulant liniments.

OLEUM TEREBINTHINÆ, *U. S.*

Oil of Turpentine.

Character as a rubefacient, and proneness to produce a vesicular eruption. Purposes for which applied, and cases in which serviceable. Added to stimulants.

LIQUOR AMMONIÆ, *U. S.*

Solution of Ammonia.

Aqua Ammoniæ.—Mode of preparation. Rationale. Color; odor; taste. Sp. gr. 0.96.

A rapid and potent rubefacient. Cases to which applicable. Caution in employment.

Granville's Lotion.—Uses.

Linimentum Ammoniæ, U. S.; *Liniment of Ammonia.*—Mode of preparing. Employment.

PIX BURGUNDICA, *U. S.*

Burgundy Pitch.

The prepared concrete juice of the *Abies excelsa.*

Description of the tree. A native of mountain districts of France, Germany, and North of Europe.

Mode of obtaining the pitch. Preparation.

Properties; consistence; tenacity; color; effect of heat and cold; odor.

Two resins in its composition, and volatile oil.

Adulterations.

Medical Properties.—A stimulating application, employed to keep up action on the cutaneous surface. Affections to which suited. Effect on some skins.

Emplastrum Picis Burgundicæ, U. S.; *Burgundy Pitch Plaster.*—Mode of preparing. Employment not only as a stimulant to skin, but to produce mechanical support.

Emplastrum Picis cum Cantharide, U. S.; *Plaster of Pitch with Spanish Flies. Emplastrum Calfaciens, Warming Plaster.*—Mode of preparation. Uses.

Enters into the composition of the *Compound Galbanum Plaster*, U. S.

PIX CANADENSIS, *U. S.*

Canada Pitch.

Hemlock Pitch.—The prepared concrete juice of *Abies Canadensis.*

Description of tree. Native of North America.

Mode of procuring the pitch.

Properties; form; color; odor.

Contains resin and volatile oil.

Medical Properties.—Has the same effect on the skin as the *Burgundy Pitch Plaster*, and may be employed for the same purposes.

ESCHAROTICS.

SUBSTANCES which destroy vitality in the part to which applied, producing disorganization, and a slough.

They may act chemically, or by direct impression. Chemically, they produce their effect by an attraction for the watery constituent of tissues, or by a union with the animal elements.

They are used to remove diseased growths. Illustration. To alter the action in diseased parts. Illustration. To open abscesses, and to make issues.

POTASSA, *U. S.*

Potassa.

Caustic Potassa. Hydrate of Potassa.—Mode of preparation. Rationale.

Form; density; color; fracture. Attraction for moisture. Impurities.

Properties as a caustic, rapid and energetic. Mode of acting. Employment. Method of applying it.

POTASSA CUM CALCE, U. S.; *Potassa with Lime. Vienna Paste.*—Preparation. Application.

ACIDUM ARSENICUM, *U. S.*

Arsenious Acid.

Before considered under the head of Alteratives. Character as an escharotic. Objection to its use from the constitutional impression. Forms of application. Abuse as a quack application.

ARGENTI NITRAS FUSUS, *U. S.*

Fused Nitrate of Silver.

Lunar Caustic.—Mentioned previously. Mode of action as a caustic. Cases to which adapted. Mode of application, solution, or in stick. Strength of solution, grs. xx—xxx to f℥j. Effect as an alterative on diseased surfaces.

HYDRARGYRI CHLORIDUM CORROSIVUM, *U. S.*

Corrosive Chloride of Mercury.

More frequently employed as a stimulating application than as an escharotic. Its application is attended with much pain. Used in watery solution, grs. x to f℥j. Cases in which serviceable.

LIQUOR HYDRARGYRI NITRATIS.

Solution of Nitrate of Mercury.

Mode of preparation. Chemical nature.

Consistence; color. Use as an alterative to surfaces.

Acid Nitrate.—Mode of preparation. Properties. Use as a potent escharotic in the treatment of diseases of the uterus. Mode of managing the application.

Alumen Exsiccatum, U.S.; *Dried Alum.*—Mode of preparing. Form and properties. A feeble escharotic. Employment.

Mineral Acids.—Used as escharotics, but objected to on account of their extension. *Nitric acid* is most used—sometimes used to remove the cuticle rapidly.

Actual Cautery.—Mode of employment. Effect upon the parts to which applied. Employment by surgeons. Design with which used. Cases in which serviceable.

Moxa.—Substances from which formed. Mode of application. Mode of operation. Cases in which serviceable. Objection to their use.

DEMULCENTS.

THESE are bland substances, readily dissolved by water, and which produce a calming, soothing effect upon irritated or inflamed surfaces.

Many of them are nutritious, and are used as articles of diet, adapted to feeble power of digestion, or to an irritated stomach, when more exciting articles cannot be taken.

Cases of disease to which they are adapted. They seem not only suited for the organs with which they come in direct contact, but are directed to irritation in organs remote, and seem to diminish acridity of the secretions.

Useful as a mode of directing drink, and are frequently employed, when in solution, as the vehicles for medicines.

ACACIA, *U. S.*

Gum Arabic.

The concrete juice of *Acacia vera* and other species of *Acacia.*

Description of the tree. Common in Egypt and Arabia.

Mode of procuring the gum. Season during which collected.

Commercial source.

Two varieties. Gum Arabic and Gum Senegal.

Gum Arabic.—Form; color; consistence; friability; appearance of fractured surface; taste. Color of powder.

Gum Senegal.—Form; appearance; color; fracture. Varieties.

Relation to water and alcohol.

Peculiar principle called *Arabin.*

Substances with which precipitates are formed.

Adulteration.

Medical Properties.—Soothing and demulcent; extensively used in medicine. Consumed in cough mixtures. Proof that it is nutritious. Use in inflammatory affections. Employment in *Emulsions.*

Syrupus Acaciæ, U. S.; *Syrup of Gum Arabic.*—Mode of preparing. A convenient preparation. Application. Employment of this preparation, or gum Arabic, in pharmacy. Changes from keeping in solution.

TRAGACANTHA, *U. S.*

Tragacanth.

The concrete juice of *Astragalus verus.*

Description of tree. An inhabitant of Turkey in Asia.

Mode of exudation.

Properties; form; appearance; color; consistence; odor; taste. Powder. Difficulty of forming it.

Effect of water upon it. Insolubility in alcohol.

Contains *Arabin*, *Tragacanthin*, and *Starch.*

Medical Properties.—Demulcent; employed principally to give consistence where a thick mucilage is required. Nutritive. Employed to form *Troches.*

ULMUS, *U. S.*

Slippery Elm Bark.

The inner bark of *Ulmus fulva.*

Description of tree. A native of the United States.

Properties of the bark. Color; structure; odor; taste.

Relation to water.

Medical Properties.—A useful demulcent. Used internally, or as an external application. The powder is employed to form cataplasms.

Infusum Ulmi, U. S.; *Infusion of Slippery Elm Bark.*—Mode of preparation. Employment.

LINUM, *U. S.*

Flaxseed.

The seeds of the *Linum usitatissimum.* The common *Flax.*

Properties of the *seeds.*

Contain an oil and a large amount of mucilaginous matter.

Oleum Lini, U. S.; *Linseed Oil.*

Relation to water.

Medical Properties.—Much employed as a demulcent. Used as a drink, with articles to flavor the solution of mucilage. Mode of preparing the draught.

Infusum Lini Compositum, U. S.; *Compound Infusion of Flaxseed.*—Used as a cough mixture, either alone or with the addition of expectorants.

Powder used in cataplasms.

GLYCYRRHIZA, *U. S.*

Liquorice Root.

The root of the *Glycyrrhiza glabra.*

EXTRACTUM GLYCYRRHIZÆ, *U. S.*

Liquorice.

The extract of the root of *Glycyrrhiza glabra.*

Description of the plant; also of *G. echinata.*

They are natives of Spain and Italy.

Root.—Size; form; appearance; structure; color externally and internally; odor; taste; liability to be worm-eaten. Powder.

Contains starch and a sweet principle called *Glycyrrhizin.* Characters of this principle.

Medical Properties.—Used generally to cover the taste of acrid substances. Made into *Decoction.*

Extract.—Form; color; consistence; odor; taste; solubility in water; impurities. *Refined Liquorice.*

Medical Properties.—An agreeable demulcent. Extensively used in cough mixtures. Laxative.

Mistura Glycyrrhizæ Composita, U. S.; *Compound Mixture of Liquorice.—Brown Mixture.*

Trochisci Glycyrrhizæ et Opii, U. S.; *Troches of Liquorice and Opium.*—Mode of preparing. Uses.

CETRARIA, *U. S.*

Iceland Moss.

Cetraria Islandica.—An inhabitant of the most northern portions of the world. First procured from Iceland.

Mode of collecting it.

Properties; form; color; appearance of surfaces; odor; taste; relation to water.

Constituents; bitter principle, *Cetrarin; Lichen Starch;* peculiar acids.

Action of iodine upon the solution.

Medical Properties.—Mucilaginous, demulcent, and tonic; well adapted to pectoral affections. It is nutritive. Cases benefited by its use. Mode of removing its bitterness.

Decoctum Cetrariæ, U. S.; *Decoction of Iceland Moss.*—Mode of preparation. Dose, f℥j to iv, every three or four hours.

CHONDRUS CRISPUS, *U. S.*

Irish Moss.

Carrageen.—Found on the coasts of England and Ireland.

Characters of plant.

Properties; form; color; odor; taste.

Contains vegetable jelly, mucus, and resins.

Medical Properties.—Nutritive and demulcent.

Cases to which adapted. Mode of preparing and administering. *Decoction.*

MARANTA, *U. S.*

Arrowroot.

The fecula of the root of *Maranta arundinacea.* A native of the West Indies. Introduced into some of the Southern States.

Description of the plant. Characters of the root.

Fecula.—Mode of preparing; form; appearance; color; liability to mustiness; insolubility in cold water.

Adulterations. Mode of detection.

Structure and appearance of the granule. Action of boiling water upon it.

Medical Properties.—When properly prepared, a nutritious demulcent. States of the system to which adapted, and diseases in which used. Mode of preparation and of flavoring.

Florida Arrowroot, from *Zamia integrifolia.*

Sandwich Island Arrowroot, from *Tacca oceanica.*

TAPIOCA, *U. S.*

Tapioca.

The fecula of the root of *Janipha manihot.* A native of the West Indies.

Description of the plant. Varieties of the root.

Properties; form; color; structure of grains; taste; appearance of the granule; partial solution in cold water.

Medical Properties.—Like those of *Arrowroot.* Mode of preparing for use. Action of boiling water.

Cassava Bread.

SAGO, *U. S.*

Sago.

The prepared fecula of the pith of *Sagus rumphii.* A native of the Malacca Islands.

Description of the plant.

Mode of obtaining sago. Varieties.

Pearl Sago.—Form; color; taste; structure of the grains; relation to water; appearance of the granules.

Common Sago.—Form; color; appearance.

Medical Properties.—A nutritious demulcent, like the preceding. Mode of preparation and employment. Rendered palatable by wine, sugar, and nutmeg.

HORDEUM, *U. S.*

Barley.

The decorticated seeds of *Hordeum distichon.* A native of various parts of the Old World. Introduced.

Preparation of Barley, called Pearl Barley.

Characters. Contains gum and fecula.

Formed into malt by germination and arrest of the process. Transformation of fecula into sugar.

Medical Properties.—Demulcent and nutritious. When prepared by decoction. A useful drink for patients laboring under inflammation or febrile diseases.

DECOCTUM HORDEI, *U. S.*; *Decoction of Barley.*—Mode of preparation. Adjuvants. Exhibition.

SALEP.—The tubers of the *Orchis mascula* and other species. Properties; preparation; employment.

EMOLLIENTS.

BLAND and unirritating substances, which serve to retain heat and moisture, are called Emollients. They are adapted for the formation of Poultices and Cataplasms, which are employed to soften, relax, and promote action of the skin; or to promote suppuration from granulating surfaces. In many cases the use of light articles is important, as, for instance, over inflamed organs, or sensitive portions of the body. When speaking of applications to the skin, the articles principally used for this purpose were enumerated, and their advantages pointed out.

DILUENTS.

Water is generally regarded as the only diluent; yet demulcent substances come under this denomination, when freely given in solution, as they serve to dilute the contents of the stomach and bowels, and may in some cases be carried into the bloodvessels, and impress remote organs concerned in secretion, or affect the whole mass of blood favorably. The employment and management of Drinks in the promotion of diuresis and diaphoresis have been explained. Whatever article is employed of those enumerated under Demulcents may be rendered agreeable to the patient by the addition of adjuvants; and in these the taste of the invalids ought to be gratified as far as proper.

ANTACIDS.

THESE substances neutralize the injurious properties of acids by combining with them in the stomach and bowels.

They are the alkalies or the alkaline earths, and by combination with acids, neutral salts are formed, which may be absorbed and eliminated by the kidneys, or be thrown off by purgation.

They also aid in the digestion of fatty substances.

The urine becomes alkaline under their use.

Prolonged employment of them will disorder the digestive functions, and ultimately occasion a liquefacient effect upon the blood and the tissues.

Cases illustrative of this impression.

Not to be regarded remedial, so much as palliative agents in acidity of the stomach. Illustration.

Diseases to which applicable.

Sorbefacient employment.

LIQUOR POTASSÆ, *U. S.*

Solution of Potassa.

Mode of preparing.

Color; taste.

Medical Properties.—Used as an antacid in dyspepsia, with bitter infusions. Dose, gtt. x to xx.

The *Carbonates of Potassa* have been considered.

An *infusion of hickory ashes and soot* is sometimes used; but it has been abused, and bad results have followed. Mode of preparation. Dose, f℥j to ij, three times daily.

SODÆ CARBONAS, *U. S.*

Carbonate of Soda.

Sources. Mode of preparation. Plants affording it.

Properties; form; appearance; effect of exposure; solubility; action of acids; taste.

Composition. Impurities.

Medical Properties.—Antacid. Cases in which serviceable. Mode of administration. Dose, grs. v to x.

SODÆ BICARBONAS, *U. S.*

Bicarbonate of Soda.

Supercarbonate of Soda.—Mode of preparation. Rationale.

Form; effect of exposure; effect of heat; taste; solubility in water.

Composition.

Medical Properties.—More used than the preceding from its modified alkaline taste. Dose, grs. x to xxx. *Soda Powders.*

Trochisci Sodæ Bicarbonatis, U. S.; *Troches of Bicarbonate of Soda.*—Mode of preparing. Uses.

LIQUOR AMMONIÆ, *U. S.*

Solution of Ammonia.

Previously considered.

Medical Properties.—Stimulating as well as antacid. Cases in which useful. Dose, gtt. v to x.

SPIRITUS AMMONIÆ, *U. S.*

Spirit of Ammonia.

Spoken of under the head of stimulants. Employment. Dose, gtt. v to xv.

LIQUOR CALCIS, *U. S.*

Lime-water.

Aqua Calcis.—Mode of preparing. Strength.

Color; effect of exposure to the atmosphere, and mode of obviating; taste.

Medical Properties.—Not only antacid, but sedative to the stomach. Employment in dyspepsia, and in irritability of the stomach. Adapted to children. Combination with milk. Dose, f℥ss; for children, f℥j.

CRETA PRÆPARATA, *U. S.*

Prepared Chalk.

Mode of preparing.

Properties; form; color; taste.

Medical Properties.—Antacid and absorbent. Employment in bowel affections. Dose, grs. v to xx.

Combinations.

Mistura Cretæ.—Formula. Dose, f℥ij to f℥ss.

Trochisci Cretæ, U. S.; *Troches of Chalk.*—Mode of preparing. Uses.

CALCIS CARBONAS PRÆCIPITATUS, *U. S.*

Precipitated Carbonate of Lime.

Mode of preparing. Rationale. Advantages. Dose, grs. v to xx.

TESTA PRÆPARATA, *U. S.*

Prepared Oyster-shells.

Mode of preparing. Properties. Supposed advantages. Dose, same as preceding.

Magnesia has been treated of under the head of Cathartics. As a mere antacid and absorbent, it is sometimes employed in small doses. For children it may be used in this way, or a olution of magnesia prepared like lime-water, and used in the same manner.

ANTHELMINTICS.

THESE medicines aid or cause the expulsion of worms from the alimentary canal.

They accomplish this object by debilitating them, and enabling purgatives to remove them; or by destroying their vitality.

Another mode is impressing them by mechanical means, rendering them uneasy in their position, and making them lose their hold, when purgatives will effect their removal.

An opinion has been expressed with regard to muscular resistance, in the larger worms, opposing the peristaltic movements.

Irritation from the presence of worms, and symptoms of derangement from this cause, both local and general.

Necessity of making a diagnosis in treating cases for worms, and the danger of proceeding blindly.

SPIGELIA, *U. S.*

Pinkroot.

The root of *Spigelia Marilandica.* A native of the Southern States. Called also *Starbloom* and *Carolina Pink.*

Description of the plant.

Properties. Form; structure; color; odor; taste. Source.

Contains a volatile oil, resin, and extractive.

Medical Properties.—Mode of impression, poisonous to worms. Action upon the system, if given too freely, and danger from this effect. Dose in powder, grs. xx. Half the quantity for children from two to four years; to be given night and morning for three or four days; to be followed by a brisk purgative. Calomel sometimes combined with it.

Infusum Spigeliæ, U. S.; *Infusion of Spigelia.*—Mode of preparing. Dose, ℥ss to ℥iv, given night and morning, followed by a brisk cathartic.

Ingredients of *Worm Teas.*

Extractum Spigeliæ et Sennæ Fluidum, U S.; *Fluid Extract of Spigelia and Senna.*—Mode of preparing. Advantages. Dose, f℥j to ij; well fitted for children.

CHENOPODIUM, *U. S.*

Wormseed.

The fruit of *Chenopodium anthelminticum.* A native of the United States. Called sometimes *Jerusalem Oak.*

Description of the plant.

Fruit; time when collected; size; color; odor; taste.

Contains a volatile oil.

Oleum Chenopodii, U. S.—Mode of obtaining; consistence; color; odor; taste. Effect of age upon it.

Another species, the *Chenopodium ambrosioides*, sometimes mistaken for the *officinal.* Points of distinction.

Medical Properties.—All parts of the plant are efficacious; the effect seems to be poisonous to the round worm especially. Seeds given in an electuary. Dose, ℈j to ij. Leaves used in decoction, with milk. The oil is given in doses of gtt. v to xx.

AZEDARACH, *U. S.*

Azedarach.

The bark of the root of *Melia azedarach. Pride of China.* A native of Asia, but introduced and flourishing in the Southern States.

Description of tree.

Properties of the bark; appearance; odor; taste.

Medical Properties.—Similar to those of *Spigelia.* Effects upon the stomach and bowels those of an emetic and cathartic. Used in *Decoction.* Dose, f℥ij to iv; for a child, f℥ss.

MUCUNA, *U. S.*

Cowhage.

The bristles of the pods of *Mucuna pruriens.* A native of East and West Indies.

Description of plant.

Fruit; bristles.

Medical Properties.—Acts mechanically. Used in syrup, as an electuary. Dose, ʒj to ij.

FILIX MAS.

Male Fern.

The *rhizoma* of *Aspidium Filix Mas.* A native of Europe.

Description of the plant.

Root. Properties; form; color; fracture; odor; taste. Powder. Effects of time and exposure. Relation to water, alcohol, and ether.

Medical Properties.—A powerful astringent. Mode of operating. Dose, ʒj. *Ethereal Extract*, dose, grs. x to xx.

GRANATI RADICIS CORTEX, *U. S.*

Bark of the Pomegranate Root.

The plant has already been described. It is used more especially in cases of tapeworm. It is a most powerful styptic, and probably acts by this impression. Used in strong *Decoction*, ℥ij to Oij water, boiled to one-half. Dose, f℥ij, or as much as the stomach will bear.

OLEUM TEREBINTHINÆ, *U. S.*

Oil of Turpentine.

Has been in use for many years as a remedy for tapeworm, but with varied reputation. Should be given in large doses, followed by castor oil; or it may be combined with it. Danger from too large doses. Advantages where other kinds of worms exist.

STANNI PULVIS, *U. S.*

Powder of Tin.

Mode of preparation.

Properties.

Acts as a mechanical agent. Dose, ʒj to ij, given in syrup, two or three times daily.

KOOSSO.

The flowers of the *Brayera anthelmintica*. Grown in Abyssinia.

Characters; odor; taste.

Value as an anthelmintic. Mode of administration.

THE END.

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Examine — Simplify